

**System and Method for Establishing Automated  
Resource Reduction Criteria**

**BACKGROUND**

**Field of the Invention**

5       The present invention relates to a system and method for  
managing human resources for an organization. More  
particularly, the present invention the present invention  
relates to a system and method for establishing resource  
reduction criteria based on the identified surplus skill groups  
10       and levels within an organization.

**Description of the Related Art**

15       Managers in modern business organizations have increasingly  
complex roles to perform in managing the various facets of the  
business organization. While managers differ greatly in the  
objectives and goals of their respective departments or areas, a  
key element that most managers deal with are the employees in  
their department or area and their efforts to retain a highly  
talented pool of employees while staying within given resource  
20       requirements, such as salary and stock budgets. Analyzing and  
assessing organizational goals and objectives is also important  
in determining which employees to retain during resource  
reduction exercises.

25       Periodically, due to business conditions and business  
performance, organizations trim their workforces by terminating  
(i.e., laying off) surplus employee resources. Reducing the

number of employees is usually a management intensive task wherein managers determine which employees are laid-off and which employees are retained. The typical goal of resource reduction activities is to retain the higher skilled workers in  
5 a given skill group and level while reducing the number of lower skilled employees or those employees that detract from the achievement of overall organizational goals.

Using traditional human resources tools, managers manually and subjectively determine which employees should be laid-off.  
10 Whether the manager analyzes employees' skills and past job performances is often a determination left to the individual managers. Because of this, managers' biases towards or against various employees often plays a most key role in actual determinations. Higher level managers typically lack  
15 fundamental data needed to make detailed analyses of managers' reduction decisions. Furthermore, higher level managers lack tools that would assist them in objectively reviewing managers' decisions in an efficient and timely basis. Because of these challenges, more skilled employees may be removed from the  
20 organization leaving less skilled employees to take their jobs. This talent void can be detrimental to the organization's technical and financial well being.

Additionally, traditional systems have little ability to assure that surplus employees are individually notified and  
25 little, if any, data is maintained evidencing employees' receipt of information regarding the resource reduction action. Some managers may fail to notify affected employees in a timely fashion and administrators of the resource reduction have little

ability to ascertain which employees have been notified without manually surveying the affected employees. Surplus employees that are in possession of trade secrets or other confidential information are often not informed of their confidentiality, and often non-compete, obligations upon being laid-off from an organization.

10  
15  
20  
25  
Furthermore, the impact of a resource reduction action is typically difficult to analyze and even more difficult to estimate beforehand. When conducting a resource reduction exercise, the organization usually has a vague idea of the savings that will be achieved and the costs, in terms of severance packages and diminished employees, of the resource reduction. Impact estimates are often use crude formulas that simply reduce a percentage of the overall workforce without taking into account individual salaries in surplus skill groups. Likewise, the impact of the actual resource reduction is often difficult to ascertain without compiling lists of affected employees. These lists often do not indicate the numbers of surplus employees that were identified in various skill groups and levels.

25  
Finally, traditional systems evaluate individual employees differently even though groups of employees are in similar skill groups. Managers of employees often evaluate employees based upon review criteria that is established loosely, at best, by the organization. Each manager may evaluate employees in his or her area differently based largely upon criteria developed by the manager, rather than the organization. Even if standard evaluation criteria is provided to management, there is little

ability for program administrators to check whether managers are actually using the standard evaluation materials.

What is needed, therefore, is a system and method to build sets of review factors for skill groups and levels that have  
5 surplus employees within the organization.

RECEIVED

**SUMMARY**

It has been discovered that the challenge of building sets of review factors for skill groups and levels that have surplus employees within the organization can be addressed using a system and method for establishing automated resource reduction criteria. An organization plans a resource reduction by identifying skill groups, such as "programmers," "engineers," and "business planner," that have surplus numbers of employees. For each of the identified skill groups, one or more evaluation templates is created. Evaluation templates may also be created based upon the level of the employee. For example, "junior programmers" would be evaluated using a different evaluation template than used for "senior programmers." Evaluation templates are used to build other evaluation templates by changing the review factors used by managers in evaluating the employees. The evaluation templates can be stored in a database for organization and retrieval and revised as needed to reflect the skills expected of employees within a particular skill group.

Managers retrieve the evaluation templates when evaluating employees' skills and, ultimately determining which of the employees is surplus to the organization. In this manner, employees in the same position (i.e., same skill group and same level) are evaluated using the same set of review factors so that more objective surplus determinations may be provided. The improvement of surplus determinations aids the organization in retaining more skilled employees and removing less skilled

employees, thus benefiting the organization's overall skill base without retaining surplus resources.

The foregoing is a summary and thus contains, by necessity, simplifications, generalizations, and omissions of detail; consequently, those skilled in the art will appreciate that the summary is illustrative only and is not intended to be in any way limiting. Other aspects, inventive features, and advantages of the present invention, as defined solely by the claims, will become apparent in the non-limiting detailed description set forth below.

10  
2004-2446-1-010000

**BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention may be better understood, and its numerous objects, features, and advantages made apparent to those skilled in the art by referencing the accompanying  
5 drawings. The use of the same reference symbols in different drawings indicates similar or identical items.

**Figure 1** is a high level diagram showing various layers of management using information managed and maintained by the People Planner System;

**Figure 2** is a hierarchy diagram showing resources, such as money used for salaries, being distributed and spread from high  
10 levels of the organization to lower levels of the organization;

**Figure 3** is a data layer diagram showing various layer components being created to form an employee profile and how  
15 planning data is used to generate actual employment data;

**Figure 4** is a diagram showing a manager using the People Planner System to perform planning and analysis functions;

**Figure 5** is a diagram showing a manager using the People Planner System to perform compensation functions;

**Figure 6** is a flowchart showing the People Planner System  
20 being used to evaluate the performance of employees;

**Figure 7** is a flowchart showing a manager identifying employees' motivators and inhibitors and the People Planner System used to determine flight risks of individual employees;

**Figure 8** is a flowchart used to group employees into contribution / flight risk quadrants for risk assessment;

**Figure 9** is a user interface and logic for organizational risk analysis concerning employees;

5 **Figure 10** is a flowchart used to analyze risk quadrants and act upon identified employees;

**Figure 11** is a flowchart used to analyze compensation of high contributing employees;

10 **Figure 12** is a flowchart used to analyze compensation of low contributing employees;

**Figure 13** is a flowchart showing details involved with comparing employees' compensation using benchmark information;

15 **Figure 14** is a flowchart showing details involved with aggregate analysis of a department or area and comparison against budgetary requirements;

**Figure 15** is a flowchart for identifying key employees and performing retention analysis for identified employees;

20 **Figure 16** is a flowchart showing tracking of additional keywords by the People Planner System to track organizational events and reporting on employees based on the additional keywords;

**Figure 17a** is a diagram of an employee managed in a matrix organization with multiple managers;



**Figure 17b** is a flowchart used to evaluate and aware employees managed in a matrix organization with multiple managers;

**Figure 18a** is a sample three tier hierarchy chart showing 5 employees and two layers of management;

**Figure 18b** is a diagram showing managers being excluded from a higher-level People Planner View;

**Figure 19** is a flowchart showing employees being selected and removed from a particular People Planner System view;

**Figure 20** is a high level flowchart showing automated activities involved in managing organizational resources;

**Figure 21** is a flowchart showing preprocessing activities performed in planning a resource reduction;

**Figure 22** is a flowchart showing the creation of evaluation templates for surplus employees in identified skill groups and levels;

**Figure 23** is a flowchart showing organizational areas being eliminated as part of an organizational resource reduction action;

**Figure 24** is a flowchart showing the identification of employees for further evaluation as part of an organization's resource reduction action;

**Figure 25** is a flowchart showing the evaluation of employees in identified skill groups and levels for resource reduction;

**Figure 26** is a flowchart showing the grouping and sorting  
5 of evaluated employees for resource reduction activities;

**Figure 27** is a flowchart showing the automated analysis of evaluated employees with respect to an organization's needs in terms of resources for various skill groups and levels;

**Figure 28** is a flowchart showing hierarchical management  
10 review of employees' skill evaluations;

**Figure 29** is a flowchart showing more detailed hierarchical management analysis of employees' skill evaluations;

**Figure 30** is a flowchart showing detailed hierarchical management analysis of employee evaluations identified as having  
15 low skills;

**Figure 31** is a flowchart showing detailed hierarchical management analysis of employee evaluations identified as having high skills;

**Figure 32** is a flowchart showing management's comparison of  
20 employees within similar skill groups and levels for surplus recommendations;

**Figure 33** is a flowchart showing project office review of surplus recommendations;

**Figure 34** is a flowchart showing legal review of surplus recommendations;

**Figure 35** is a flowchart showing financial impact estimation of a proposed surplus action prior to evaluation of employees' skills;

**Figure 36** is a flowchart showing financial impact analysis of a surplus action after evaluating and recommending individual employees for surplus disposition;

**Figure 37** is a flowchart showing management notification of surplus employees;

**Figure 38** is a flowchart showing processing of surplus notification and non-compete obligations by affected employees;

**Figure 39** is a hierarchy chart showing relationships between processes involved in managing organizational resources; and

**Figure 40** is a block diagram of an information handling system capable of implementing the present invention.

**DETAILED DESCRIPTION**

The following is intended to provide a detailed description of an example of the invention and should not be taken to be limiting of the invention itself. Rather, any number of variations may fall within the scope of the invention which is defined in the claims following the description.

**Figure 1** is a high level diagram showing various layers of management using information managed and maintained by the People Planner System. Executive management **100** use People Planner System **170** to enter and view strategic employee data **105**. For example, executive management **100** may use People Planner System **170** to analyze potential skill deficits or receive rollup information regarding risk assessments. This information can be used by executive management **100** to allocate additional resources to problem areas.

Division management **110** use People Planner System **170** to enter and view division level employee data **115**. Division management **110** use People Planner System **170** similarly to executive management **100** except with a focus on the particular division within the organization. Again, problem areas reported by managers in employee evaluations and risk assessments can be used to provide additional resources to projects and to alert executive management to potential problems. In addition, employee analyses can be performed at high levels such as division management **110** and executive management **100** to determine whether employees with similar talents and experience levels are compensated and awarded similarly. Anomalies, such

as poor performing employees receiving large salary increases and high performing employees receiving little or no salary increases can be identified, analyzed, and likely corrected.

Project managers 120 use People Planner System 170 to provide and view project level employee data 125. Project managers, like division and executive managers, can view information about any employee (including managers) reporting to the project manager. While executive management and division management may focus more on spotting anomalies and analyzing summary data to identify potential problems, project managers may often view individual employee information, especially to determine whether employees are being compensated and rewarded consistently and fairly by the department managers. Project managers 120 may also hold management meetings where People Planner System data pertaining to the department managers is excluded so that the management team can focus on the employees within the project and determine whether the employees are being treated fairly or whether poorer performing employees in one department are being evaluated as higher contributors to higher performing employees in another department. Discrepancies such as these can be resolved dynamically by the project manager or one of the department manager changing employee data. The revised employee data can thereafter be viewed and discussed. The process of refining the People Planner System data continues until the management team is satisfied with the information pertaining to all employees in the project.

Department managers 130 (i.e., immediate managers, foremen, direct supervisors) use People Planner System 170 to enter and

view department level employee data 135. Department managers 130 use People Planner System 170 to evaluate employee performance, perform risk assessment, perform compensation and stock planning, complete or revise development plans for employees, perform retention plans for key employees identified as having executive potential or key technical potential, and provide additional data pertaining to employees that the manager wishes to attend HR programs or company events, such as special meetings, classes, or projects.

Human resources personnel 140 use People Planner System to assist various levels of management with personnel related questions and use People Planner System to view and enter human resources data 145. While assisting various levels of management, human resources 140 uses their skill and experience with analyzing employee data to aid management in making employee decisions and to assist managers in using People Planner System 170 to appropriately analyze the People Planner System information pertaining to the managers' employees. Human resources 140 also uses People Planner System to include new programs and events that can be used by managers with their employees. In addition, human resources 140 may determine when certain People Planner System functions take place. For example human resources 140 may determine when planning data is finalized and used as a basis for current, or actual, data to reflect employees' compensation changes, stock awards, and the like.

Computer network 150 is used to connect the various managers to People Planner System 170. Computer network 150 may

be a local area network (LAN), a Wide Area Network (WAN), a mainframe computer with connected terminals, or a virtual private network (VPN) implemented over a public network such as the Internet. Computer network 150 receives People Planner requests 160 and passes the received requests to People Planner System 170. People Planner System 170 processes the request and maintains employee database 190 to store the data. In one embodiment, employee database 190 is a Lotus Notes™ database. In large organizations, employee data may be divided among several databases for performance and utilization reasons. In a distributed model, employee data for a particular area, such as a project or company location, may be located on the same database for improved maintenance of related employee records and improved lower level analyses. Higher level analyses use information summarized from the distributed databases in order to provide executive management 100 and perhaps division management 110 strategic employee data 105 and division level employee data 115. The People Planner System process request 160 and prepares and returns responses 180 which is viewed on the manager's display screen.

**Figure 2** is a hierarchy diagram showing resources, such as money used for salaries, being distributed and spread from high levels of the organization to lower levels of the organization. A limited amount of compensatory resources 200 are available to distribute to employees. The amount of compensatory resources 200 depends on the size and economic health of the organization. If fewer resources are available than in previous years, executive management 210 may be forced to lower salaries or

reduce the number of employees through voluntary or involuntary measures.

Executive management 210 determines how the available compensatory resources will be spread among the various high level divisions of the organization. In the example shown in **Figure 2**, three division salary data are determined by executive management 210 (division salary data 212, division salary data 214, and division salary data 216). The division salary data is written to budget files available to the division managers in the People Planner System. The People Planner System is used by executive management 210 to aid in the division salary determination by providing executive management 210 with current salary needs of the various divisions, summaries of the employees and locations of the various divisions, and risk analysis information pertaining to the various divisions. The risk analysis information may alert executive management 210 to a potential situation where key types of employees, such as those with sought after technical skills, are at risk of leaving the organization. This type of information may prompt executive management to allot more to divisions at risk so that such skilled employees can be better compensated to avoid potential attrition problems. In addition, the People Planner System includes projected or planning data that aids in determining appropriate percentages of increases that should be allocated to the various divisions.

The division management, in turn, use the provided division salary data to determine how to spread the division compensatory amounts to areas, such as projects, within the division. In the



example shown, division management **220** receives division salary data **214** from executive management. Division management **220** uses the People Planner System to allocate division salary data **214** to the various projects included in the division. Once again, the People Planner System is used to provide division management **220** with current salary needs of the various projects, summaries of the employees and locations of the various projects, and risk analysis information pertaining to the various projects. Division managers also use projected, or planning, data included in the People Planner System that was provided by lower levels of management. The People Planner System is used to distribute budget amounts to the various project managers. In the example shown in **Figure 2**, division management **220** provides salary budgeting data to three projects. The budgeting data is provided to the projects through the People Planner System (project salary data **222**, **224**, and **226**).

Project management uses the allocated project salary data to provide budget data to the various departments that are included in the project. The project manager's determinations are made at a more micro- rather than macro-level with individual employees' needs often used as a basis for the project manager's decisions. Again, the People Planner System is used to provide management, in this case project manager **230**, with current salary needs of the employees, summaries of the employees and of the various departments, and risk analysis information pertaining to the various employees and projects. Project managers also use projected, or planning, data included in the People Planner System that was provided by immediate, or

department, managers during prior planning cycles. The People Planner System is used to distribute budget amounts to the various department managers. In the example shown in **Figure 2**, project manager **230** provides salary budgeting data to three departments using the People Planner System (department salary data **232**, **234**, and **236**).

10  
15  
20  
25

Department managers receive budget data from their project managers and use the budget data to plan compensatory changes for individual employees in the department manager's department. In the example shown, department manager **240** receives department salary budget data **234**. The People Planner System is used to provide management, in this case department manager **240**, with current salary needs of the employees in the department, summaries of the employees, and risk analysis information pertaining to the employees. Department manager **240** uses the People Planner System to plan compensatory changes and to record the planned changes in order for the department manager and higher levels of management to analyze the planned changes in light of the budget restraints.

The People Planner System is also used to move budget amounts between divisions, projects, and departments. For example, if a given department was initially allocated more money than deemed needed (for example, based on employee contributions and comparison of the employees' current salaries with those of employees in other departments), money that was initially allocated to the department may be reallocated by the project manager to a department that was initially under-funded. This same "give-and-take" can be applied to higher levels of the

organization with the People Planner System used to identify possible areas for re-allocation and facilitate the transfer of budget amounts from one area to another.

**Figure 3** is a data layer diagram showing various layer components being created to form an employee profile and how planning data is used to generate actual employment data. Employee profile **300** includes actual and planning data corresponding to an employee. Actual data **305** includes information such as the employee's current salary and stock options that have been granted to the employee, the employee's current job title, level, and performance rating and any other information that the organization uses to track and assess employees. Actual data **305** may also include historical data, such as the employee's past salary levels, prior stock awards, and prior job titles, levels, and performance ratings.

The manager performs risk analysis **310** using the employee's actual data to determine the employee's value to the organization and the risk of the employee leaving the organization for other opportunities (see **Figures 7 - 10** for detailed descriptions of risk analysis using the People Planner System). The manager's risk analysis is provided to the People Planner System as risk planning data **315**. Employee profile **300** now has a richer set of data **320** for making further decisions regarding the employee's compensation and development.

Employee profile data **320** includes actual (or current) data as well as the risk planning data. This data is used by the manager in using the People Planner System's compensation

planner 330. Based on the employee's actual data and the risk analysis data the manager is better equipped to plan changes to the employee's compensation. At this stage, compensation planning data 335 may simply identify the employee for a certain level of salary increase (i.e., significant increase, increase, cost of living increase, and no increase) it may actually plan a certain dollar-amount salary change for the employee. Compensation planning data 335 is used by the People Planner System to create an even richer set of data (340) that now includes actual data, risk planning data, and compensation planning data.

Employee profile data 340 is used by the People Planner System for the manager's stock planning 350. Actual data, risk planning data, and compensation planning data aids in the determination of whether to plan to give the employee stock options and, if so, how many options to plan on giving to the employee. Risk planning data is usually important during stock option considerations because the options typically vest over a period years providing an incentive for employees that may be at risk for leaving to stay in the organization until their options vest. In addition, the value of prior stock option awards is also useful in making the determination because prior options that are "under water" (i.e., the price of the option is now greater than the current price of the stock) have less influence on employees who are considering leaving the organization. In these situations, it may be prudent to grant additional options at the new (lower) current stock price to provide additional incentives to retain the employee. Stock planning data 355 is

added to employee profile **300** creating an even richer set of employee profile data (**360**).

Compensatory considerations often include both compensatory planning considerations (step **330**) as well as stock planning considerations (step **350**). The manager may go back and forth between various stages in order to refine the data and better assess the employee's risk of leaving and the right mix of salary increases and stock option awards. For example, for a contributing employee that is at risk of leaving the organization, the manager may first decide to give the employee a significant increase in salary. However the employee's risk of leaving may be viewed as more important than the employee's current contribution. As such, the manager may decide to plan on giving the employee a sizable number of options that vest over a number of years and lower the salary increase to a standard increase, perhaps in light of salary budget constraints. The manager may go back and forth several times between compensation planning **330** and stock option planning **350** for a given employee until the manager feels she has the right mix. For additional assistance, the manager can use the People Planner System to engage the advice and experience of human resources personnel who are trained to help managers evaluate and analyze employee situations.

Employee profile **300** now includes employee data **360** which includes actual (current) employee data, risk planning data, compensation planning data, and stock planning data. Employee data **360** provides a picture for the manager to use in performing other activities such as development planning **364**, retention

planning 374, and identifying the employee for additional HR programs or organization events (382). Development planning 364 results in development planning data 368 which is added to the employee's profile data. Likewise, retention planning 374 results in retention planning data 378 and additional planning 382 results in additional employee data 386 which are each added to the employee's profile data. Retention planning 374 involves identifying employees with high potential early in the employee's career and establishing and tracking employee goals or milestones so that the full potential of such employees is realized by the organization (see Figure 15 for more details regarding retention planning).

Employee profile data 370 now includes actual (current) data, risk planning data, compensation planning data, stock planning data, development planning data, retention planning data, and additional planning data providing a large snapshot of the employee, the employee's current contributions, opportunities and challenges associated with the employee, and near- and far-term plans for the employee's career with the organization.

The data captured in employee profile 300 is analyzed in management meetings and often refined in light of the employee's contribution and expected value in comparison with that of other employees. The salary and stock option planning may have only indicated that the organization planned to give the employee a "significant increase" or "significant stock option award" without specifying the actual dollar amount of the increase or the actual number of shares and vesting period for stock. In

5 this case, the planned salary increase and stock option award are converted to actual dollar and stock figures in light of the salary and stock option budgets. The planned amounts are then made effective at a certain point in time during roll-over process 390.

10 During roll-over process 390 certain planning items, such as compensation and stock planning figures are moved to the employee's actual (current) data. Other items such as the employee's evaluation rating are also moved from planning areas to the actual data area. Prior actual figures are moved to historical actual data areas in order to keep a record of the employee's prior salaries, stock options, and evaluations. Short term planning data areas, such as the salary planning area and the stock planning area are cleared in order to prepare for the next planning cycle. The new actual data is used in a production environment to generate paychecks with the employee's new salary level and to generate stock option data that is provided to employees for acceptance of the newly granted options and eventual exercise of such options. Long term planning data, such as risk analysis data, development planning data, and retention planning data are retained for further refinement in future planning cycles so that the planning efforts of the manager are not lost or forgotten. In addition, when an employee moves from one department to another department (or when a new manager is assigned to a department) the new manager uses the People Planner System to view the planning and actual data established by the manager's predecessor, thus

aiding and smoothing the transition from one manager to the next.

**Figure 4** is a diagram showing a manager using the People Planner System to perform certain planning and analysis functions. People Planner Data **400** includes employee profiles **410** and Human Resources program data **405** as well as other data. Employee profile data **410** includes planning factors **415** (such as risk planning data, salary and stock planning data, development planning data, etc.) corresponding to employees. Employee profile data **410** also includes actual data **420** (such as the current salary, stock option grants, evaluation rating, etc.) corresponding to employees.

Manager **425** uses various components of the People Planner System to make pre-planning requests **430** to pre-planning tool **435** included with the People Planner System. Pre-planning tool **435** reads HR program data **405** and employee profile data **410** alerting the manager of new human resources programs and identifying employees that, based on the HR program criteria, might be considered for various programs. Manager **425** may select one or more employees for the HR program and provide planning response **440** which is used by pre-planning tool **435** to retain the manager's selections in selected employee profiles **410**.

What-If Scenarios tool **450** is used by manager **425** to try various planning factors and explore the overall planning results without committing to the planning factors. For example, manager **425** may provide what-if request **445** to look at



the department if everyone that is identified as being a high risk to leave the company was given a significant salary increase and an award of stock options. What-if results 455 would be returned to manager 425 by the what-if scenario tool and display the effect on the department. The manager may determine that too much of the salary budget would be used for these individuals and not leave enough for high contributing employees that are not at risk of leaving. Scenario tool 450 can be used repeatedly to help the manager gain an understanding of the effects of certain planning decisions. If manager 425 is satisfied with the scenario results, the planning factors used to create the results can be applied to employee profiles 410. In addition, HR personnel can share the manager's online view of such scenario results and provide guidance for refining the planning factors. If the what-if results are not acceptable by manager 425 then the planning factors used by the what-if tool can be discarded and not applied to employee profiles 410.

Employee analysis tool 465 is used by manager 425 to further analyze an individual employee or a group of employees included in employee profiles 410. Manager 425 provides employee requests 460 to the employee analysis component of the People Planner System. Manager 425 uses employee analysis tool 465 to evaluate the contributions of the employee and determine whether the employee is a low or high contributor and whether a promotion should be planned for the employee. These determinations are provided in the manager's employee responses 470 that are used by employee analysis component 465 and retained in employee profile 410. The manager's employee

responses 470 may identify employees as low or high contributors and may also assign an evaluation rating (i.e., "A," "B," "C," etc.) to the employee (see **Figure 6** for further detail regarding employee evaluations using the People Planner System).

5 Risk assessment component 480 of the People Planner System is used by manager 425 to identify employees that are at risk of leaving the organization. Manager 425 provides risk requests 475 to risk assessment component 480 identifying one or more employees from employee profile 410. Risk assessment tool 480  
10 assists the manager in evaluating risks concerning employees. Manager's risk responses regarding such employees is used by the risk assessment tool to update the employee's risk planning data maintained in the employee's employee profile 410.

15 **Figure 5** includes additional People Planner System tools used by managers to plan for employee salary changes, stock options, and other awards. People Planner Data 500 includes salary budget data 505, available option data 510, employee profiles 512 and award budget data 520. Salary budget data 505 includes available salary data that has been allocated to the  
20 manager's area or department. Likewise, available option data 510 includes stock options available for the manager to grant to one or more employees. Employee profile data 512 includes planning factors data 516 and actual, or current, data 518. Award budget data 520 includes budgets for both monetary awards  
25 525 and non-monetary awards 530. Non-monetary awards may include extra vacation days, admission to a special organizational event or program, lunch with an executive or the like.

Manager 540 uses salary tool component 550 of the People Planner System to plan salary changes for employees. Salary input 545 includes the salary changes requested by the manager. Salary tool 550 updates the appropriate employee profile planning factors 516 data for the selected employee. Salary tool 550 also provides manager 540 with updated salary planning data 555 comparing the manager's planning data for one or more employees with salary budget 505. Salary tool 550 can also be used to compare employee's actual data 518 and planning factors 516 with organizational, regional, or national averages for people with similar skills and contribution levels. Salary tool 550 can also be used to analyze whether people are being compensated fairly. For example, salary tool 550 can aid the manager in identifying high contributors that are receiving small or no salary increases. On the other side, salary tool 550 can be used to identify low contributing employees that are planned to receive large or significant salary increases.

Stock option tool 565 is a People Planner System component to aid manager 540 in identifying employees that should receive stock options. Stock option tool 565 reads the available stock option budget data 510 which includes the amount of options that are available for the manager's employees. Stock option tool 565 also reads employee profile data 512, particularly planning factors data 516 which includes risk planning data and contribution data corresponding to the employees. This information is used by manager 540 to determine whether the employee is a high contributor to the organization with critical skills and the flight risk the employee presents to the

organization. Based on this analysis, manager 540 decides whether to plan to award the employee stock options and, if so, how many options to provide and the vesting period for the options (stock input 560). Updated stock data 570 is provided from stock option tool 565 to manager 540 in response to stock option input 560 provided by the manager. The manager can use the updated stock data to determine whether the stock planning data should be changed.

Awards tool 580 is a People Planner System component to aid manager 540 in identifying employees that should receive monetary and non-monetary awards. Awards tool 580 reads the available awards budget data 520 which includes the amount of monetary and non-monetary awards options that are available for the manager's employees. Awards tool 580 also reads employee profile data 512, particularly contribution data corresponding to the employees. This information is used by manager 540 to identify employees that are planned to receive an award, the type of award the employee is planned to receive, and the amount of the award if the award is monetary (award input 575). This data is stored in the appropriate employee profiles 512. Updated award data 585 is provided from awards tool 580 to manager 540 in response to award input data 575 provided by the manager. The manager can use the updated award data to determine whether the award planning data should be changed.

Figure 6 is a flowchart showing the People Planner System being used to evaluate the performance of employees. Processing commences at 600 whereupon the first employee is selected (step 610) from department data 605 stored in the People Planner

System. The manager analyzes the employee on a variety of planning factors. A determination is made as to whether the employee is a top contributor for the organization (decision 615). If the employee is a top contributor, decision 615 branches to "yes" branch 618 whereupon a flag is set in the employee's People Planner Data indicating that the employee is a top contributor (step 620). On the other hand, if the employee is not a top contributor, decision 615 branches to "no" branch 622 whereupon another determination is made as to whether the employee is a low contributor (decision 625). If the employee is a low contributor, decision 625 branches to "yes" branch 628 whereupon a flag is set in the employee's People Planner Data indicating that the employee is a low contributor (step 630). If neither flag is set (i.e. the low or high contributor flags) then the employee is deemed an average contributor to the organization.

The next decisions deals with the amount of pay increase to plan on giving the employee. A determination is made as to whether the employee should receive a significant, or high, increase in salary (decision 635). If the employee should receive a significant salary increase, decision 635 branches to "yes" branch 638 whereupon a flag is set in the employee's People Planner Data indicating that the employee should receive a significant salary increase (step 640). On the other hand, if the employee should not receive a significant salary increase, decision 635 branches to "no" branch 642 whereupon another determination is made as to whether the employee should receive no increase, or perhaps a salary reduction (decision 645). If

the employee should receive no increase, or perhaps a salary reduction, decision 645 branches to "yes" branch 648 whereupon a flag is set in the employee's People Planner Data indicating that the employee should receive no increase, or perhaps a salary reduction (step 650). If neither flag is set (i.e. the significant increase or no increase flags) then the employee is planned to receive a normal salary increase.

10 A determination is made, based factors such as the employee's contribution to the organization, current level, and time spent at the current level, as to whether the employee should be promoted during the next cycle of promotions (decision 660). A higher level position often means greater potential salary and stock option awards. If the manager determines that the employee should be promoted based on various factors, 15 decision 660 branches to "yes" branch 662 whereupon a flag is set in the employee's People Planner Data indicating that the employee should be promoted (step 685). On the other hand, if the manager does not decide that the employee should be promoted, decision 660 branches to "no" branch 668 bypassing the 20 promotion setting step.

A determination is made, based factors such as the employee's skills, experience, contribution, and risk of the employee leaving the organization, as to whether the employee should receive stock options (decision 670). An employee with 25 critical skills which are marketable to other competing organizations often receive stock options to provide an incentive for such employees to remain with the organization for the amount of time it takes for the options to vest. If the

manager determines that the employee should receive stock options, decision 660 branches to "yes" branch 662 whereupon a flag is set in the employee's People Planner Data indicating that the employee should receive stock options (step 675). On the other hand, if the manager does not decide that the employee should receive stock options, decision 670 branches to "no" branch 678 bypassing the stock option setting step.

10 A determination is made as to whether there are more employees that the manager needs to evaluate (decision 680). If there are more employees, decision 680 branches to "yes" branch 685 which selects the next employee (step 685) from department data 605 and loops back to evaluate the employee. This looping continues until all employees have been evaluated, at which time decision 680 branches to "no" branch 688 whereupon processing ends at 695.

15  
20 **Figure 7** is a flowchart showing a manager identifying employees' motivators and inhibitors and the People Planner System used to determine flight risks of individual employees. Processing commences at 700 whereupon the first employee is selected (step 705) from department data 702 stored in the People Planner System.

25 The manager selects the first motivator for the selected employee (step 710). As the name implies, motivators are factors that motivate the selected employee in his or her job. Examples of motivators include autonomy, base salary, communication, decision making authority, degree of challenge, geographic location, immediate management, monetary recognition,

and opportunity for advancement. By the manager's understanding of the employee's likes and dislikes and from discussions or feedback received from the employee, the manager determines what motivates the employee and what inhibits, or hinders, the employee. If the selected employee is motivated by autonomy, the manager selects autonomy as a motivator and then applies a weight, or level of importance, to the motivator (step 715). If an employee is greatly motivated by autonomy, a greater weight is applied to the motivator. The motivator and corresponding weight are saved in the employee's People Planner Data for future use in calculating the employee's flight risk.

A determination is made as to whether there are other motivators corresponding to the employee (decision 720). If there are more motivators, decision 720 branches to "yes" branch 722 whereupon the next motivator is selected (step 725) and a weight is applied (step 715). This looping continues until there are no more motivators to apply to the employee at which time decision 720 branches to "no" branch 728 whereupon the process repeats for identifying inhibitors that apply to the employee.

The manager selects the first inhibitor for the selected employee (step 730)). As the name implies, inhibitors are factors that inhibit the selected employee in his or her job. Examples of inhibitors include autonomy, base salary, communication, decision making authority, degree of challenge, geographic location, immediate management, monetary recognition, and opportunity for advancement. By the manager's understanding of the employee's likes and dislikes and from discussions or



feedback received from the employee, the manager determines what inhibits, or hinders, the employee. If the selected employee is inhibited by opportunity for advancement, the manager selects opportunity for advancement as a inhibitor and then applies a weight, or level of importance, to the inhibitor (step 735). If an employee is greatly inhibited by opportunity for advancement, a greater weight is applied to the inhibitor. The inhibitor and corresponding weight are saved in the employee's People Planner Data for future use in calculating the employee's flight risk.

10 A determination is made as to whether there are other inhibitors corresponding to the employee (decision 740). If there are more inhibitors, decision 740 branches to "yes" branch 742 whereupon the next inhibitor is selected (step 745) and a weight is applied (step 735). This looping continues until there are no more inhibitors to apply to the employee at which time decision 740 branches to "no" branch 748.

20 The employee's flight risk is calculated (step 750) after the employee's motivators and inhibitors have been identified and weighed. The calculation may be performed by the manager by displaying the list of the employee motivators and inhibitors arranged by weighted value and providing the manager with employee data, such as salary data and job descriptions, to aid the manager in determining a flight risk value by comparing and contrasting the employee's motivators and inhibitors with the employees current circumstances. The flight risk calculation can also be computed using historical modeling data to compare the employee's motivators, inhibitors, and current job situation with other that have left the company. A strong similarity

between the employee's profile and employees that left the organization results in a higher flight risk, while a weaker similarity results in a correspondingly lower flight risk.

5 A determination is made as to whether there are more employees for which the manager needs to assess risk (decision 760). If there are more employees, decision 760 branches to "yes" branch 765 which selects (step 770) the next employee from department data 702 and loops back to analyze the employee. This looping continues until all employees have been analyzed, at which time decision 760 branches to "no" branch 775 whereupon processing ends at 795.

10 **Figure 8** is a flowchart of logic used to group employees into contribution / flight risk quadrants for risk assessment. Processing commences at 800 whereupon the first employee is selected (step 810) from department data 805 stored in the People Planner System.

15 The employee's contribution level is assigned (step 820). In one embodiment, the employee's contribution level is assigned by performing an employee evaluation process integrated with the People Planner System, such as the process described in **Figure 6**. The employee's flight risk is also assigned (step 825). In one embodiment, the employee's flight risk is assigned by performing an risk assessment process integrated with the People Planner System, such as the process described in **Figure 7**.

20 Determinations are made based on the employee's contribution level and flight risk in order to assign a "risk

quadrant" to the employee. Risk quadrants therefore include: employees with low contribution to the organization and high risk to leave the organization (quadrant "A"), employees with high contribution to the organization and high risk to leave the organization (quadrant "B"), employees with high contribution to the organization and low risk to leave the organization (quadrant "C"), and employees with low contribution to the organization and low risk to leave the organization (quadrant "D"). Grouping employees into risk quadrants aids management, especially upper management, in analyzing large groups of employees, such as a site location, and determining whether future attrition problems are likely based on the percentage of employees in quadrant "A" and especially quadrant "B." If problem areas exist, management can analyze employees in a given quadrant to determine if common inhibitors or motivators exist that can be used to encourage employees to remain with the organization.

A determination is made as to whether the selected employee's contribution to the organization is "high" (decision 830). If the manager indicates that the selected employee's contribution is high, decision 830 branches to "yes" branch 832 whereupon a decision is made as to whether, based on the employee's inhibitors and motivators, the employee presents a flight risk to the organization (decision 835). If the employee presents a flight risk, decision 835 branches to "yes" branch 838 whereupon the employee is assigned (step 840) to quadrant "B" indicating a high contributor presenting a high flight risk to the organization. On the other hand, if the employee does

not present a flight risk, decision **835** branches to "no" branch **842** whereupon the employee is assigned (step **845**) to quadrant "C" indicating a high contributor presenting a low flight risk to the organization.

5       Returning to decision **830**, if the selected employee's contribution to the organization is not "high", decision **830** branches to "no" branch **848** whereupon a decision is made as to whether, based on the employee's inhibitors and motivators, the employee presents a flight risk to the organization (decision **850**). If the employee presents a flight risk, decision **850** branches to "yes" branch **852** whereupon the employee is assigned (step **855**) to quadrant "A" indicating a low contributor presenting a high flight risk to the organization. On the other hand, if the employee does not present a flight risk, decision **850** branches to "no" branch **858** whereupon the employee is assigned (step **860**) to quadrant "D" indicating a low contributor presenting a low flight risk to the organization.

10  
15  
20       A determination is made as to whether there are more employees that need to be assigned to a risk quadrant (decision **870**). If there are more employees, decision **870** branches to "yes" branch **875** which selects (step **880**) the next employee from department data **805** and loops back to assign the employee to a risk quadrant. This looping continues until all employees have been analyzed, at which time decision **870** branches to "no" branch **885** whereupon processing ends at **895**.

25       **Figure 9** is a user interface and logic for organizational risk analysis concerning employees. Screen **900** shows a risk

analysis summary showing the percentage of employees that were assigned to the various risk quadrants. Screen 900 includes groupings 910 and summary data 950. The user selects one of the groupings and a summary data item. Selected grouping 920 and selected data 940 are used by summary process 930 to create new summary process 960 which has new groupings 980 based upon the previously selected grouping. New summary 960 also includes new summary data 970 based upon the previously chosen grouping and summary data item. The new summary, including new groupings 980 and new summary data 970 are displayed in screen 990. In the example shown, the user selected the grouping 985 ("Employees by Division") and selected the "B" quadrant. The division breakdown for the "B" quadrant is therefore shown in screen 990. Further groupings and selected data items can be selected to more fully understand the risk analysis data.

Figure 10 is a flowchart used to analyze risk quadrants and act upon identified employees. Processing commences at 1000 whereupon the first risk quadrant (i.e. Quadrant "A") is selected (step 1010). The selected quadrant is displayed to the manager (step 1020, see Figure 9, screen 900 for an example quadrant view). The manager analyzes the risk quadrant data to determine whether changes are needed (step 1025, see Figure 9, screen 990 for an example of analyzing risk quadrants). Risk quadrants can be analyzed down to viewing the group of employees that are included in a particular risk quadrant. A determination is made by the manager if changes are needed to any employees within the currently viewed risk quadrant (decision 1025). If changes are needed, decision 1025 branches

to "yes" branch 1028 whereupon an employee in the risk quadrant is selected (step 1030). A determination is made as to whether changes are needed to the employee's incentives (decision 1040). If changes are needed to the selected employee's incentives, decision 1040 branches to "yes" branch 1048 whereupon the manager makes changes to the employee's planned nomination for stock options or other non-monetary award incentives designed to retain employees (step 1048). If changes are not needed to the selected employee's incentives, decision 1040 branches to "no" branch 1058 bypassing changes to the employee's stock options and non-monetary awards.

Another determination is made as to whether to edit the employee data, such as risk planning data (decision 1060). This determination may be in light of seeing the employee in a quadrant that does not match manager's knowledge of the employee or in light of new information learned about the employee's inhibitors or motivators. In addition, this decision might be made because of a recent or dramatic change in the employee's contribution or value to the organization based on newly acquired skills or experiences. If changes are needed to the employee's People Planner Data, decision 1060 branches to "yes" branch 1068 whereupon the manager edits one or more employee planning factors (step 1070). On the other hand, if the manager does not need to edit the employee's planning factors, decision 1060 branches to "no" branch 1072 bypassing the edit employee planning factors step.

After changes are made to the selected employee the quadrant data view is updated to reflect the changed information

(step 1075) and processing returns (loop 1078) to view the quadrant information. This looping continues until no changes are needed, at which point decision 1025 branches to "no" branch 1082.

5 A determination is made as to whether there are more quadrants to analyze (decision 1085). If there are more quadrants to analyze, decision 1085 branches to "yes" branch 1088 whereupon the next quadrant is selected (step 1090) and processing loops back to analyze the selected quadrant. This looping continues until there are no more quadrants to analyze, at which point decision 1085 branches to "no" branch 1092 and risk analysis processing ends at 1095.

10  
15 **Figure 11** is a flowchart used to analyze compensation of high contributing employees. The immediate (i.e., department) manager may perform the analysis in addition to higher level managers and HR personnel checking the fairness of employee evaluations.

20 Processing commences at 1100 whereupon the People Planner System selects top contributing employees that have not been identified as having critical skills (step 1105). Top contributing employees often have critical skills that make them valuable, and therefore high contributors, to the organization. This selection helps management analyze why an employee has been identified as a top contributor without critical skills. It may  
25 be that the employee's critical skills were not noted or that the employee was incorrectly identified as a top contributor. In some cases, it may simply be that an employee without

critical skills is a top contributor because of the employee's work ethic and ability to handle more tasks in a high quality manner. The selected employees are displayed to the manager (step 1110). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1115). If an employee's data needs to be changed, decision 1115 branches to "yes" branch 1118 whereupon an employee is selected and data pertaining to the employee is changed (step 1120) and processing loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which time decision 1115 branches to "no" branch 1122.

Another selection identifies employees having critical skills that have not been identified as top contributing employees (step 1125). This is the reverse situation as the selection performed in step 1105. The selected employees are displayed to the manager (step 1130). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1135). If an employee's data needs to be changed, decision 1135 branches to "yes" branch 1138 whereupon an employee is selected and data pertaining to the employee is changed (step 1140) and processing loops back to re-analyze the group in light of the changed data. This looping



continues until no employee data needs to be revised, at which time decision 1135 branches to "no" branch 1142.

10  
15  
20  
A further selection identifies employees identified as top contributing employees that are not receiving a significant pay increase (step 1145). Top contributing employees need to be rewarded for their efforts. In some cases, analysis of an employee in this group may reveal an employee that, for some reason, is currently overpaid in light of the employee's position, job title, and level and therefore does not require a significant salary increase. In other cases, an oversight may have occurred in not planning significant salary increases for top contributing employees. The selected employees are displayed to the manager (step 1150). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1155). If an employee's data needs to be changed, decision 1155 branches to "yes" branch 1158 whereupon an employee is selected and data pertaining to the employee is changed (step 1160) and processing loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which time decision 1155 branches to "no" branch 1162.

25  
Another selection identifies employees identified as top contributing employees that are not receiving a grant of stock options (step 1165). Top contributing employees need to be rewarded for their efforts and stock options present an incentive for such top contributing employees to remain at the

company. In some cases, analysis of an employee in this group may reveal an employee that does not warrant a stock option grant. For example, an high contributing employee with little flight risk may prefer awards and greater salary increases instead of stock options. In other cases, an oversight may have occurred in not planning stock option awards for top contributing employees. The selected employees are displayed to the manager (step 1170). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1175). If an employee's data needs to be changed, decision 1175 branches to "yes" branch 1178 whereupon an employee is selected and data pertaining to the employee is changed (step 1180) and processing loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which time decision 1175 branches to "no" branch 1182 whereupon this phase of compensation planning ends at 1195.

**Figure 12** is a flowchart used to analyze compensation of low contributing employees and to query additional anomalies with high and low contributors. The immediate (i.e., department) manager may perform the analysis in addition to higher level managers and HR personnel checking the fairness of employee evaluations.

Processing commences at 1200 whereupon the People Planner System selects low contributing employees that have been identified as having critical skills (step 1205). Low

contributing employees often do not have critical skills. This selection helps management analyze why an employee has been identified as a low contributor with critical skills. It may be that the employee's critical skills were incorrectly noted or  
5 that the employee was incorrectly identified as a low contributor. In some cases, it may simply be that an employee with critical skills is a low contributor because of the employee's work ethic or attitude and inability to handle tasks in a quality manner. The selected employees are displayed to  
10 the manager (step 1210). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1215). If an employee's data needs to  
15 be changed, decision 1215 branches to "yes" branch 1218 whereupon an employee is selected and data pertaining to the employee is changed (step 1220) and processing loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which  
20 time decision 1215 branches to "no" branch 1222.

Another selection identifies employees identified as low contributing employees that are receiving a significant pay increase (step 1225). Low contributing employees typically are not rewarded as handsomely as higher contributing employees. In  
25 some cases, analysis of an employee in this group may reveal a low contributing employee that, for some reason, is currently underpaid in light of the employee's position, job title, and level and therefore requires a significant salary increase. In

other cases, an oversight may have occurred in planning significant salary increases for low contributing employees. The selected employees are displayed to the manager (step 1230). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1235). If an employee's data needs to be changed, decision 1235 branches to "yes" branch 1238 whereupon an employee is selected and data pertaining to the employee is changed (step 1240) and processing loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which time decision 1235 branches to "no" branch 1242.

A further selection identifies employees identified as low contributing employees that are receiving a grant of stock options (step 1245). Analysis of these employees may reveal an employees that do not warrant stock option grants. It may also be revealed that some employees in this group are not low contributors and have been identified as such incorrectly. The selected employees are displayed to the manager (step 1250). The manager views the selected employees and can view detailed data regarding the employees. A determination is made as to whether an employee's data in the People Planner System needs to be changed in light of the displayed data (decision 1255). If an employee's data needs to be changed, decision 1255 branches to "yes" branch 1258 whereupon an employee is selected and data pertaining to the employee is changed (step 1260) and processing

loops back to re-analyze the group in light of the changed data. This looping continues until no employee data needs to be revised, at which time decision **1255** branches to "no" branch **1262**.

5 Further top and bottom contributor queries can be performed to further identify anomalies with the planning factors currently in place for individual employees (step **1270**). People Planner Data pertaining to these employees can be changed as needed to better reflect the employees' contributions and rewards and compensation for such contributions (step **1280**). Compensation planning thereafter ends at **1295**.

10  
15  
20  
25  
e0303-09403  
Figure 13 is a flowchart showing details involved with comparing employees' compensation using benchmark information. Processing commences at **1300** whereupon the first employee in a group, such as a department or project, being analyzed is selected (step **1310**). From prior People Planner System processes, the employee should already have a job level and job title, however if the employee is new or otherwise does not have a level and job title this data is supplied to the People Planner System and stored in the employee's People Planner Data area (step **1320**). In addition, compensation levels should already be set for the employee's current compensation and salary planning data for the employee's next pay increase may already be stored in the People Planner System. If the employee does not have a current salary, then the employee's current compensation amounts are entered into the People Planner System (step **1325**).

The employee's job title and level (i.e., "Senior Programmer") are converted to a corresponding national or geographic job title and level (i.e., "software programmer with 5 or more years of experience") using a table relating the company's job titles and levels to nationally recognized titles and levels (step 1330). The national job title and level is used to search (step 1340) national or geographic employment data 1335 for national averages and other data about national salary ranges for the job title and level (i.e., average salary for first, second, third and fourth quartiles, etc.). Other averages are retrieved from the People Planner System for the salary data regarding the employee's job title and level within the organization (step 1350). This data may be for the organization as a whole, the employee's site, project, or department or combinations thereof.

Variances between the employees actual (and possibly planned) compensation and various retrieved national and organizational benchmarks is displayed to management or human resources personnel (step 1360). Large variances indicating that an employee is underpaid may warrant changing the employee's planning data, for example to identify the employee for a significant increase, to get the employees salary in line with the benchmark data. A determination is made as to whether the employee's data needs to be revised (decision 1370). If the employee's data needs to be revised, decision 1370 branches to "yes" branch 1372 which loops back to enable management or human resources to reset employee information (i.e., compensation amounts) and redisplay the new planning factors in comparison

with the available benchmarks. This looping continues until no further revisions to the employee's data are needed, at which point decision 1370 branches to "no" branch 1378 whereupon a determination is made as to whether there are more employees to analyze (decision 1380).

If there are more employees to analyze, decision 1380 branches to "yes" branch 1385 which selects the next employee (step 1390) and loops back to perform a comparison analysis for the selected employee. This looping continues until no more employees in the selected group need to be processed, at which time decision 1380 branches to "no" branch 1392 and processing ends at 1395.

Figure 14 is a flowchart showing details involved with aggregate analysis of a department or area and comparison against budgetary requirements. Processing commences at 1400 whereupon various compensation counters, such as total pay increases, total stock options, total promotions, and total awards, are initialized to zero (step 1410). People Planner Data for all employees within a particular group, such as a project or department, are selected from the People Planner Data (step 1420). The first employee from the selected group is selected (step 1425). The counters for planned pay increases, stock options, promotions and awards are accumulated by adding the current value of such counters to the planned pay increase, planned stock option grant, planned promotion, and planned awards for the currently selected employee (step 1430). A determination is made as to whether more employees exist in the group to be processed (decision 1440). If more employees exist,

decision 1440 branches to "yes" branch 1445 and the next employee in the group is selected (step 1450) and processing loops back to add the selected employees compensatory information to the running totals stored in the counters. This looping continues until all employees in the group have been processed and all planned pay increases, stock awards, promotions, and awards have been totaled. When all employees have been processed, decision 1440 branches to "no" branch 1452 whereupon budget amounts are retrieved (step 1450) from group budget data 1455 (such as a department or project budget). Variances between the planned salary increases, stock awards, promotions, and awards and budgeted amounts are calculated and displayed (step 1470). A determination is made, based on the displayed variances, as to whether changes are needed to employee planning factors to rectify any variances (decision 1475). If changes are needed, decision 1475 branches to "yes" branch 1478 which allows management or human resources personnel to select one or more employees (step 1480), increase or decrease planned salary increases, stock awards, promotions, and awards (step 1485), and loop back to the beginning to reprocess the group and determine any further variances and changes needed. This looping continues until variances have been rectified and further changes to employee data is not needed, at which point decision 1475 branches to "no" branch 1492 and processing ends at 1495.

**Figure 15** is a flowchart for identifying key employees and performing retention analysis for identified employees. Processing commences at 1500 whereupon a first employee is



selected (step 1510) from employee data 1505. A determination is made as to whether the selected employee is a technical employee or identified as a potential executive candidate (decision 1520). If the employee is identified as a possible  
5 key technical employee, decision 1520 branches to "yes" branch 1528 whereupon the employee's technical experience is identified and stored in the People Planner System (step 1530). On the other hand, if the employee is identified as a potential executive candidate, decision 1520 branches to "no" branch 1522  
10 whereupon the employee's skill and areas of expertise are identified (step 1525).

The next career goal for the selected employee is identified (step 1540) along with the expected amount of time planned for the employee to achieve the next goal (step 1545).  
15 The employee's ultimate goal (i.e., "Chief Technical Architect," "Division Vice President," etc.) is identified (step 1550) along with the expected amount of time planned for the employee to achieve the ultimate goal (step 1555). A mentor, such as an experienced employee in the organization, is identified for the  
20 employee (step 1560). In addition, special certification or training planned for the employee to reach the goals is identified (step 1570) along with any additional comments regarding the employee's potential. The identified information is stored in the employee's People Planner Data and used for  
25 long term management and direction of the employee.

A determination is made as to whether other potential key technical or executive candidates exist in the group (decision 1580). If more candidates exist in the group, decision 1580

branches to "yes" branch **1585** which selects the next employee candidate (step **1590**) and loops back to process the next candidate. This looping continues until no more candidates are identified whereupon decision **1580** branches to "no" branch **1592** and processing ends at **1595**.

**Figure 16** is a flowchart showing tracking of additional keywords by the People Planner System to track organizational events and reporting on employees based on the additional keywords. Keywords can be added to the People Planner System to track data such as employees attending an important conference, employees selected for a special organizational retreat, employees nominated for special awards, or any other number of items that the organization wishes to track for employees.

Processing commences at **1600** whereupon an administrator defines one or more keywords in the People Planner System (step **1610**). The People Planner System includes a notice area where notices about new keywords and other People Planner System changes are disseminated to management. An email message or the People Planner System notice area is used to inform management of the new keywords (step **1620**). Management selects an employee for one of the newly defined keywords (step **1625**). The keyword is set, or flagged, in the People Planner Data corresponding to the selected employee (step **1630**). A determination is made as to whether more employees should be selected for the newly added keyword (decision **1640**). This determination can be made over an amount of time and may be made by several different managers when analyzing their employees. If more employees should be selected for the keyword, decision **1640** branches to "yes" branch

1645 whereupon the next employee is selected for the keyword  
(step 1650) and processing loops back to set the keyword in the  
People Planner Data corresponding to the selected employee.  
This looping continues until no more employees are selected for  
5 the keyword whereupon decision 1640 branches to "no" branch  
1655. Depending on the keyword a deadline may be established  
for a keyword so that employees are identified for the keyword  
before the deadline. For example, to prepare for a conference,  
a deadline typically exists for registering for the conference.  
10 At some point, a People Planner System administrator selects all  
employees that were selected for a particular keyword and  
reports or special processing takes place with the selected  
employees (step 1660). For example, if the keyword corresponds  
to a conference, the People Planner System would process the  
15 selected employees and send registrations for each employee to  
the conference coordinators. A determination is made as to  
whether the keyword corresponds to a one time event or an  
ongoing activity or event (decision 1670). If the keyword does  
not correspond to a one time event, decision 1670 branches to  
20 "no" branch 1672 bypassing the release of keyword space from the  
People Planner System. On the other hand, if the keyword  
corresponds to a one time event, decision 1670 branches to "yes"  
branch 1678 whereupon a People Planner System administrator  
retains a copy of a report or data file with the employees  
25 selected for the keyword (step 1680) and the administrator  
releases the data space used to store the keyword data so that  
it can be used for other keywords (step 1690). Keyword  
processing thereafter ends at 1695.

**Figure 17a** is a diagram of an employee managed in a matrix organization with multiple managers. In the example shown, employee 1700 reports to three different managers - manager A (1710), manager B (1720), and manager C (1730). Also shown are the effort, or activity, levels that the employee is expected to provide to the various managers' departments. In the example shown, employee 1700 spends fifty percent of his time working for manager A (1710), twenty percent of his time working for manager B (1720), and thirty percent of his time working for manager C (1730).

**Figure 17b** is a flowchart used to evaluate and aware employees managed in a matrix organization with multiple managers. Processing commences at 1750 whereupon the first manager evaluates the employee and provides salary increase, stock award, award, and evaluation ratings for the employee. The manager's evaluation is multiplied (step 1760) by a multiplier corresponding to the amount of work the employee performs for the manager (i.e. the work percentage discussed in **Figure 17a**). Likewise, the manager's planning of the employee's pay increase is computed (step 1765), along with a stock award computation (step 1770), and an awards computation (step 1775). A determination is made as to whether additional managers need to evaluate the employee (decision 1780). If additional managers need to evaluate the employee, decision 1780 branches to "yes" branch 1782 whereupon the next manager evaluates the employee (step 1785) and processing loops back to multiply the next manager's evaluations and preplanning data with the multiplier corresponding to the manager. When all managers that

manage the employee have performed evaluations, decision 1780 branches to "no" branch 1788 whereupon the employees total evaluation, salary increase, stock award, and other awards is computed by adding the various factors computed for each manager (step 1790). The People Planner System can also facilitate communication between managers that each manage a given employee so that a fair assessment of the employee's contributions can be made in light of the employee's efforts and complexity involved in working in multiple areas.

10 **Figure 18a** is a sample three tier hierarchy chart showing employees and two layers of management. Project manager 1800 has three managers reporting to her (department manager A (1805), department manager B (1810), and department manager C (1815)). Each of these department managers have three employees reporting to them. Employees 1 (1820), 2 (1822), and 3 (1824) report to department manager A (1805); Employees 4 (1826), 5 (1828), and 6 (1830) report to department manager B (1810)); and Employees 7 (1832), 8 (1834), and 9 (1836) report to department manager C (1815). If project manager 1800 wants to hold a management meeting to discuss employee contributions and planning factors, sharing her view with the department managers would allow the department managers to see confidential salary, compensation, and evaluation information pertaining to the other department managers. Instead, project manager 1800 can "exclude" the department managers from her view of people planner data to allow the management team to analyze the employee planning factors and evaluations without showing information regarding the department managers. **Figure 18b** shows

high level exclusion processing and **Figure 19** shows detailed processing involved with setting up shared views and excluding certain employees from the viewed information.

**Figure 18b** is a diagram showing managers being excluded from a higher-level People Planner View. The project manager's normal view (1850) lists employees reporting to the project manager from the example shown in **Figure 18a** including three department managers and nine employees reporting to the department managers. Exclude managers process 1855 is performed to create a new project managers view (1860) which lists the employees without listing the department managers. A granting process (1865) allows the project manager to share the new project manager's view (1860) with the department managers. The result is a shared project manager's view (1870) viewable by the project manager (1875), department manager A (1880), department manager B (1885), and department manager C (1890).

**Figure 19** is a flowchart showing employees being selected and removed from a particular People Planner System view. Processing commences at 1900 whereupon a list of all reporting employees is displayed on the manager's display device (step 1905). The project (or higher level) manager selects the first employee (such as a reporting manager) to excluded from a new view (step 1910). The People Planner Data associated with the selected employee is excluded from the new view (step 1915). A determination is made as to whether the manager wants to exclude more employees (such as the department managers) from the new view (decision 1920). If the manager wishes to exclude more employees, decision 1920 branches to "yes" branch 1925 whereupon

the next employee (i.e., the next department manager) is selected (step 1930) and processing loops back to excluded the selected employee from the new view. This looping continues until there are no more exclusion to process, at which time  
5 decision 1920 branches to "no" branch 1935.

A determination is made as to whether the manager wishes to save the new view or revise the manager's current view (decision 1940). If the manager wishes to create a new view, decision 1940 branches to "yes" branch 1945 whereupon the manager provides a new view name to identify the view (step 1950) and the new view is saved using the new view name (step 1955). On the other hand, if the manager simply wants to revise her current view, decision 1940 branches to "no" branch 1960 whereupon the revised view is saved (step 1965).

The employees granted access to the view will often be the employees whose People Planner Data has been excluded from the view. The excluded employees can automatically be granted access to the new view or the project manager can select employees individually.

The manager selects a first employee (i.e., a department manager) to grant access to the new or revised view (step 1970). The selected employee is granted access to the new or revised view (step 1975). A determination is made as to whether additional grants need to be given for the new or revised view  
25 (decision 1980). If more grants need to be given, decision 1980 branches to "yes" branch 1985 whereupon the next employee is selected for granting access to the new or revised view (step

1990) and processing loops back to grant the selected employee access to the view. This looping continues until there are no more employees that need access to the view, at which time decision 1980 branches to "no" branch 1992 and processing ends at 1995.

Figure 20 is a high level flowchart showing automated activities involved in managing organizational resources. Processing commences at 2000 whereupon resource management preprocessing activities are invoked (predefined process 2010, see Figures 21 - 23 for processing details).

Preprocessing activities determine which organizational areas, skill groups, and levels are affected by a workforce reduction. During a workforce reduction employees are identified as surplus employees (i.e., laid-off), and certain organizational areas may be eliminated. After the organizational areas, skill groups, and levels have been identified, employees in the identified areas with matching skills and levels are evaluated (predefined process 2020, see Figures 24 and 25 for processing details) to determine which employees will be identified as surplus employees. Typically immediate supervisors or management evaluates the employees.

The evaluations are reviewed, usually by higher levels of management and possibly by a "project office" that includes human resource professionals that manage the surplus reduction action. Hierarchical review (predefined process 2030, see Figure 28 for processing details) includes in-depth review of employees' evaluations by higher management layers,



identification of employees as surplus employees, as well as project office and legal review of employees recommended for surplus by management.

5 A determination is made as to whether the employee's evaluation should be revised based on a variety of factors (decision 2040). If the evaluation should be revised, decision 2040 branches to "yes" branch 2044 which loops back to re-evaluate the employee with guidance provided by management, the project office, or legal review. On the other hand, if the evaluation does not need to be revised, decision 2040 branches to "no" branch 2048 whereupon the proposed surplus reduction is analyzed (predefined process 2050, see Figure 36 for processing details) to determine the costs and benefits of performing the surplus reduction.

15 A determination is made as to whether the proposed surplus reduction needs to be revised (decision 2060) based upon analyzing the resource reduction impact. For example, it may be determined that too many employees have been identified as surplus that may detrimentally affect the organization because of the sudden loss of skills. Alternatively, it may be determined that too few employees have been identified as surplus resulting in less compensation savings than expected. If the proposed resource reduction needs to be revised, decision 2060 branches to "yes" branch 2064 which loops back to adjust surplus parameters and re-evaluate employees based on the readjusted parameters. On the other hand, if the proposed resource reduction does not need to be revised, decision 2060 branches to "no" branch 2068 whereupon affected employees are

notified and the notification and acknowledgement are tracked and recorded (predefined process 2070, see Figures 37 and 38 for processing details). Processing subsequently ends at 2095.

Figure 21 is a flowchart showing preprocessing activities performed in planning a resource reduction. Processing commences at 2100 whereupon the organization's financial data (2110) is analyzed (step 2105). A determination is made as to whether the organization needs to reduce resources in order to reduce costs and improve the organization's financial performance (decision 2115). If the organization does not need to reduce resources, decision 2115 branches to "no" branch 2118 and processing ends at 2120. On the other hand, if the organization does need to reduce resources, decision 2115 branches to "yes" branch 2128 whereupon resource reduction preprocessing continues.

Organizational data 2125, describing areas of the organizations such as departments, projects, divisions, and functions, are read and analyzed (step 2130). Areas that are no longer needed by the organization are identified for elimination (step 2140) and stored with other areas identified for elimination in eliminated areas data store 2145. Areas with surplus resources are also identified (step 2150) and stored in surplus areas data store 2155.

Surplus resources may include particular skill groups that have more employees than needed by the organizational area. For example, a software development area may have a larger percentage of business planners than is needed to perform the

software development activities. In addition, specific skill groups can be identified as having surplus resources. For example, a project developing software using primarily Java may have a larger percentage of Visual Basic™ programmers than needed to perform the Java development. These surplus skill groups are identified by analyzing the areas with surplus resources (step 2160) and the resulting analysis is stored in surplus skill groups data store 2165.

In order to identify which individual employees should be eliminated as surplus resources, evaluation templates are built for each identified skill group that was found to include surplus resources (predefined process 2170, see Figure 22 for further processing details) and stored in a library of evaluation templates 2175 which will be used by management to evaluate employees.

Using the identified skill groups, employee data, and planned amount of surplus reduction, an estimated planned surplus impact can be generated (predefined process 2170, see Figure 35 for processing details) to estimate percentages of employees in various skill groups and levels that will be identified as surplus in order to attain certain cost savings for the organization. In addition, resource reduction program costs, such as severance packages for employees identified as surplus, can be estimated during predefined process 2170. Preprocessing activities thereafter end at 2195.

Figure 22 is a flowchart showing the creation of evaluation templates for surplus employees in identified skill groups and

levels. Processing commences at 2300 whereupon a skill code for a template is received (input 2205) by a template creator. A template creator is a person that determines what factors are used to evaluate a particular skill group and level. For example, a junior level programmer may be reviewed against factors such as "Understands Java programming fundamentals" and "Able to prepare Java source code based on design documentation." Likewise, a senior programmer may have review factors such as "Expertise in all facets of Java," "Mastery of software design implementation," and "Ability to lead software team in design goals."

The input code received from the user is used to locate (step 2220) an existing skill code and its corresponding review factors from templates data store 2210. Templates data store may be implemented using a database, such as Lotus Notes™ or another database product. A determination is made as to whether the skill code was found in the template data store (decision 2225). If the skill code was found, decision 2225 branches to "yes" branch 2228 whereupon the current review factors corresponding to the skill code are retrieved (step 2230) and the display factors are displayed to the user allowing the user to modify and/or delete current review factors corresponding to the skill code (step 2235). On the other hand, if the skill code was not found, decision 2225 branches to "no" branch 2238 whereupon a new set of review factors is initialized for the new skill code and the new skill code is included in the templates data store (step 2240).

A determination is made as to whether the skill code that the user entered is related to one or more skill codes (decision 2245). For example, different levels of Java programmers may have similar review factors, with higher level programmers being evaluated against "mastery" of certain factors while lower level programmers may be evaluated against a lower threshold, such as "understanding" or "ability." In addition, higher level skills may have additional review factors corresponding the responsibilities not required of lower level employees, such as team leading and management responsibilities. The determination as to related or similar skill groups may be determined based on a skill code naming convention (e.g., all skill codes beginning with "PRG" are deemed to be have similar or related factors), additional, the user could be prompted to retrieve additional skill code templates from which the user could copy review factors and paste into the skill template upon which the user is working. If there are related or similar review factors in other skill groups, decision 2245 branches to "yes" branch 2248 whereupon a skill code is entered (step 2250) and the review factors corresponding to the entered skill code are retrieved (step 2255). A determination is made as to whether there are more templates that the user wishes to retrieve (decision 2260). If there are more templates that the user wishes to retrieve, decision 2260 branches to "yes" branch 2261 which loops back to retrieve the next template. This looping continues until all desired templates are retrieved whereupon decision 2260 branches to "no" branch 2262. On the other hand, if there are no related or similar review factors from which the user can copy review

factors, decision 2245 branches to "no" branch 2263 bypassing steps taken to load related templates.

5 The user can add, edit, or delete review factors that correspond to the desired skill code. A user action is received (input 2264). A determination is made as to whether the user is modifying an existing review factor (decision 2265). If the user is modifying an existing review factor, decision 2265 branches to "yes" branch 2268 whereupon review factors from loaded templates are displayed (step 2270), the user selects one of the displayed review factors (input 2272), and the user changes the selected review factor (input 2275). On the other hand, if the user wishes to enter a new review factor without copying from an existing template, decision 2265 branches to "no" branch 2278 and the new review factor is provided by the user (input 2280).

15 The modified or added review factor is stored along with the skill code in the template data store (step 2285). A determination is made as to whether the user wants to modify, add, or delete review factors corresponding to the current template (decision 2290). If the user wants to perform further actions to the current template, decision 2290 branches to "yes" branch 2292 which loops back to process the user's next action. This looping continues until the user no longer wishes to add, delete, or modify review factors corresponding to the current skill code, at which time decision 2290 branches to "no" branch 2294 and processing ends at 2295.

**Figure 23** is a flowchart showing organizational areas being eliminated as part of an organizational resource reduction action. Processing commences at **2300** whereupon the first eliminated area is retrieved (step **2310**) from eliminated areas data store **2305**. The eliminated areas were previously identified during preprocessing activities (see **Figure 21** for details).

Employee data **2315** includes data about employees in the organization including data regarding the area, such as department, project, function, and division data that is used to locate the first area in the selected eliminated area (step **2320**). A determination is made as to whether an employee was found in the selected eliminated area (decision **2330**). If an employee was found, decision **2330** branches to "yes" branch **2335** whereupon data for the located employee is added (step **2340**) to eliminated employees data store **2345**. The next employee in the eliminated area is located (step **2350**) from employee data **2315** and processing loops back to decision **2330**. When an employee record is not found for the eliminated area, decision **2330** branches to "no" branch **2355** whereupon data regarding the next eliminated area is retrieved (step **2360**) from eliminated areas data store **2305**.

A determination is made as to whether data for the next eliminated area was found (decision **2370**). If another eliminated area was found, decision **2370** branches to "yes" branch **2380** whereupon processing loops back to process the employees within the eliminated area. This looping continues until there are no more eliminated areas to process, at which

time decision 2370 branches to "no" branch 2390 whereupon processing of eliminated areas ends at 2395.

Figure 24 is a flowchart showing the identification of employees for further evaluation as part of an organization's resource reduction action. Processing commences at 2400 whereupon the first surplus area is located (step 2410) from surplus areas data store 2405. Surplus areas data stores 2405 includes data regarding surplus areas that were identified during preprocessing activities (see Figure 21 for further details).

The first employee that works in the selected surplus area is located (step 2420) by reading employee data store 2415 that includes data about employees in the organization, including the area (i.e., department, project, function, division) for which the employee works along with the employee's skill group (i.e., the type of job the employee has such as a programmer, business planner, manager, etc.) and the employee's level (i.e., senior programmer, associate programmer, junior programmer, etc.). A determination is made as to whether an employee was found in the surplus area (decision 2425). If an employee was found, decision 2425 branches to "yes" branch 2428 to further analyze and process the employee. On the other hand, if an employee was not found, decision 2425 branches to "no" branch 2465 to analyze the next surplus area.

If an employee was found in the surplus area, decision 2425 branches to "yes" branch 2428 whereupon the employees skill group is matched (step 2430) against the identified surplus



skill groups **2435**. During preprocessing activities, certain skill groups were identified for reduction (see **Figure 21** for further details). For example, a surplus area may need to reduce the number of business planners that are employed by the area but not need to reduce the number of programmers. In addition, levels of employees may be targeted for reduction so that the number of junior business planners is reduced while the number of senior business planners is not reduced.

A determination is made as to whether the selected employee's skill group (and level if applicable) is found in the list of surplus skill groups (decision **2440**). If the employee's skill group was not found in the list, decision **2440** branches to "no" branch **2442** bypassing the step of adding the employee to the affected group. On the other hand, if the employee's skill group was found in the list, decision **2440** branches to "yes" branch **2444** whereupon data regarding the employee (e.g., the employee's employee number and other identifying information) is added (step **2445**) to affected group data store **2450**. Affected group data store **2450** includes data about employees that will be evaluated to determine which employees from the affected group will be laid-off (i.e., identified as surplus employees, see **Figures 24-27** for details regarding evaluations of affected employees). Regardless of whether the employee is in an affected skill group, processing loops back (loop **2455**) to locate the next employee in the area (step **2460**) and determine whether another employee was found in the area (decision **2425**). This looping continues until no more employees are found in the affected area, at which point decision **2425** branches to "no"

branch **2465** whereupon the next surplus area is located (step **2470**) from surplus area data store **2405**.

10 A determination is made as to whether a next surplus area is found (decision **2475**). If a next surplus area is found, decision **2475** branches to "yes" branch **2480** which loops back to process the employees in the next area and determine which of those employees are added to the affected group. This looping continues until there are no more surplus areas to process at which point decision **2475** branches to "no" branch **2485** whereupon the affected employees are evaluated (predefined process **2490**, see **Figure 25** for details) and processing ends at **2495**.

15 **Figure 25** is a flowchart showing the evaluation of employees in identified skill groups and levels for resource reduction. Processing commences at **2500** whereupon a first department within the identified surplus area is retrieved (step **2510**). A determination is made as to whether a department was found within the identified surplus area (decision **2515**) as processing will continue until all departments in the identified surplus area have been processed. When there are no more departments to process, decision **2515** branches to "no" branch **2518** whereupon processing ends at **2520**. On the other hand, while there are departments to process, decision **2515** branches to "yes" branch **2522** whereupon a first employee from within the selected department is retrieved (step **2525**) from affected employees data store **2530**.

A determination is made as to whether an employee was found within the selected department (decision **2535**) as processing of

the department will continue until all employees within the department have been processed. If there are no more employees within the selected department, decision **2535** branches to "no" branch **2590** which locates (step **2595**) the next department from surplus areas data store **2505** and loops back to process the next department until all departments have been processed. On the other hand, if an employee from the selected department was found in affected group data store **2530**, decision **2535** branches to "yes" branch **2538** in order to process the selected employee.

A template corresponding to the selected employee's skill group and level (e.g., junior programmer, senior business analyst, etc.) is retrieved (step **2540**) from evaluation templates data store **2545**. A first review factor is selected from the retrieved evaluation template (step **2550**). The reviewer, usually the employee's manager or supervisor, evaluates the selected employee using the criteria set forth in the selected review factor (step **2555**). A determination is made as to whether there are more review factors in the evaluation template to use in the employee's evaluation (decision **2560**). If there are more review factors, decision **2560** branches to "yes" branch **2562** which loops back to select the next review factor from the evaluation template (step **2565**) and evaluate the employee using this review factor. This looping continues until there are no more review factors to use from the selected evaluation template, at which point decision **2560** branches to "no" branch **2568** whereupon the employee's evaluation is stored (step **2570**) in evaluated employees data store **2575**, and the next employee in the selected department is located (step **2580**) from

affected group data store **2530** and processing loops back to process the next employee. This looping continues until there are no more employees in the selected department to process, at which time decision **2535** branches to "no" branch **2590** to locate  
5 the next department within the surplus area.

**Figure 26** is a flowchart showing the grouping and sorting of evaluated employees for resource reduction activities. Processing commences at **2600** whereupon a first surplus skill group is located from surplus skill groups data store **2605**. A  
10 determination is made as to whether a surplus skill group as located (decision **2615**) as processing continues until all skill groups have been processed. If the next skill group is not located (i.e., all skill groups have been processed), decision  
15 **2615** branches to "no" branch **2618** whereupon the employees are analyzed (predefined process **2620**, see **Figure 27** for further details) and processing ends at **2622**.

On the other hand, if a surplus skill group was found, decision **2615** branches to "yes" branch **2624** whereupon the first level within the skill group is selected (step **2625**) from job  
20 levels data store **2630**. A determination is made as to whether a first (next) job level for the selected skill group was found (decision **2635**) as all levels for the selected skill group are processed.

A job level within a skill group often notes an employee's  
25 experience or proficiency at within the skill group. For example, a new programmer may have a level of "Junior," with an intermediate programmer having a level of "Associate," and an

experienced programmer having a level of "Senior." In addition, some organizations give employees numeric or alphanumeric levels to note experience, such as level "1" being a junior level ranging to higher numbers (i.e., level "10") for more experienced levels.

10  
15  
20  
25

If the job level was found for the selected skill group, decision 2635 branches to "yes" branch 2638 to process the skill group / level combination. Employees with the selected skill group and level are selected (step 2640) from evaluated employees data store 2645. The selected group is then sorted by the employees' evaluation in order to further evaluate employee needs (step 2650). In a database environment, the group could be selected and sorted with an SQL query statement (e.g., "SELECT \* FROM EVALUATED\_EMPLOYEES WHERE SKILL\_GROUP = "PROGRAMMER" AND LEVEL = "JUNIOR", ORDER BY EVALUATION).

The next level within the skill group is located (step 2680) for processing from job levels data store 2630 and processing loops back to process the next level. This looping continues until a next job level is not located, at which point decision 2635 branches to "no" branch 2690 whereupon the next surplus skill group is located (step 2695) from surplus skill groups data store 2605 and processing loops back to process the next skill group. This looping continues until there are no more skill groups to process, at which point decision 2615 branches to "no" branch 2618 whereupon the grouped and sorted employees are analyzed (predefined process 2620, see Figure 27 for processing details) and processing thereafter ends at 2622.

**Figure 27** is a flowchart showing the automated analysis of evaluated employees with respect to an organization's needs in terms of resources for various skill groups and levels. Processing commences at **2700** whereupon the first surplus skill group and level are selected (step **2710**) from surplus plan data store **2720**. Surplus plan data store **2720** includes surplus planning data for various skill groups and levels that are developed during resource reduction planning. As shown, skill group "A" (i.e., "programmers") has a planned reduction of 5% for level 1 employees and a reduction of 14% for level 2 employees, while skill group "B" (i.e., "business planners") has a planned reduction of 17% for level 1 employees and a reduction of 12% for level 2 employees.

Employees with the selected skill group and level are selected (step **2725**) from sorted employees data store **2730**. The surplus percentage of employees is selected from the group based upon the employees' evaluations (step **2740**) so that those employees with worse evaluations are recommended for surplus before employees with better evaluations. The selected percentage of employees is stored (step **2750**) in recommended surplus data store **2760**. Recommended surplus data store **2760** thus includes a list of employees that are recommended for surplus based upon the surplus percentage for the employees' skill group and level and the employees' evaluations.

The next level within the skill group is selected (step **2765**) from surplus plan data store **2720**. A determination is made as to whether a next level was found (decision **2770**). If it was found, decision **2770** branches to "yes" branch **2772** which

loops back to process the selected level. This looping continues until all levels within the selected skill group have been processed, at which time decision 2770 branches to "no" branch 2776 to process the next skill group.

5       The first level within the next skill group is selected (step 2780) within surplus plan data store 2720 (step 2780). A determination is made as to whether a next surplus skill group was found (decision 2785). If a next skill group was found, decision 2785 branches to "yes" branch 2788 which loops back to process the first level within the selected skill group. This looping continues until there are no more skill groups to process, at which time decision 2785 branches to "no" branch 2792 and processing ends at 2795.

10  
15  
20  
25  
      **Figure 28** is a flowchart showing hierarchical management review of employees' skill evaluations. Line management processing commences at 2800 whereupon the manager evaluates the selected employee (predefined process 2804, see **Figure 25** for processing details). The manager may receive a review of the manager's evaluation of the employee from reviewing management or from the personnel project office managing the resource reduction (step 2808). A determination is made as to whether the manager receives instructions or recommendations to rework the employee's evaluation (decision 2810). For example, the manager may have given a low evaluation to an employee with a stellar work history that is receiving stock options. In this instance, it is very likely that the manager erred in evaluating the employee and the employee's evaluation should be reworked. In this case, decision 2810 branches to "yes" branch 2812 to re-

evaluate the selected employee. On the other hand, if the manager does not receive a rework instruction or recommendation from reviewing management or the project office, decision 2810 branches to "no" branch 2814 and processing ends at 2816.

5        Reviewing management processing commences at 2820 whereupon reviewing management receives an employee evaluation from a manager along with the manager's digital signature authenticating the evaluation (step 2824). The reviewing manager(s) analyze the evaluation (predefined process 2828, see 10 **Figure 29** for processing details). The reviewing manager(s) determine whether to agree with the manager's evaluation based upon the analysis (decision 2832). If the reviewing manager(s) do not agree with the manager's evaluation of the employee, decision 2832 branches to "no" branch 2834 whereupon a message 15 is returned to the manager instructing the manager to rework the evaluation (or further explain the manager's evaluation) along with a digital signature authenticating the source of the message (step 2836) and reviewing manager processing ends at 2868.

20        On the other hand, if the reviewing manager(s) agree with the manager's decision, decision 2832 branches to "yes" branch 2838 whereupon the employee is compared to other employees within the same skill group and level to determine whether to recommend the selected employee for surplus (predefined process 25 **2840**, see **Figure 32** for processing details). A determination is made as to whether reviewing management wishes to recommend the selected employee for surplus (decision 2844). If management does not wish to recommend the employee for surplus, decision



2844 branches to "no" branch 2846 and reviewing management processing of the employee ends at 2868. On the other hand, if reviewing management does wish to recommend that the selected employee be laid off (e.g., surplus), decision 2844 branches to "yes" branch 2848 whereupon the recommendation is sent to the project office for further review along with a digital signature authenticating the sender of the message (step 2852). The reviewing management receives the project office's action (step 2856). A determination is made by the reviewing management as to whether the surplus recommendation was accepted by the project office (decision 2860). If the recommendation was not accepted, decision 2860 branches to "no" branch 2862 which loops back to re-analyze and re-evaluate the employee. On the other hand, if the recommendation was accepted, decision 2860 branches to "yes" branch 2864 and reviewing management processing of the employee ends at 2868.

Project office processing commences at 2870 whereupon the project office receives a surplus recommendation for an employee along with a digital signature authenticating the reviewing management that made the recommendation (step 2872). The project office reviews the recommendation (predefined process 2876, see Figure 33 for processing details). Legal review of the surplus recommendation is also performed (predefined process 2880, see Figure 34 for processing details) to determine whether the determination may violate any applicable employment laws. A determination is made as to whether the project office agrees with the surplus recommendation (decision 2884). If the project office does not agree with the surplus recommendation, decision

2884 branches to "no" branch 2886 whereupon the recommendation is returned to the reviewing management with comments and possible instructions along with the project office's digital signature authenticating the project office as the sender of the message (step 2888) and project office processing of the employee ends at 2895. On the other hand, if the project office agrees with the surplus recommendation, decision 2884 branches to "yes" branch 2890 whereupon the selected employee is added to the list of surplus employees (step 2992) and project office processing of the employee ends at 2895.

Figure 29 is a flowchart showing more detailed hierarchical management analysis of employees' skill evaluations. Processing commences at 2900 whereupon a determination is made as to whether the manager's evaluation of the employee identified the employee as having relatively low skills for the employee's skill group and level (decision 2905). If the employee was identified as a low-skills employee in the manager's evaluation, decision 2905 branches to "yes" branch 2908 for low-skill analysis. On the other hand, if the employee was not identified as a low-skills employee, decision 2905 branches to "no" branch 2928 for higher skill analysis.

Branch 2908 leads to an analysis of the low-skills evaluation (predefined process 2910, see Figure 30 for processing details). A determination is made as to whether the analysis also revealed that the employee has relatively low skills for the skill group and level (decision 2915). If the analysis determined that the employee has low skills, decision 2915 branches to "yes" branch 2918 whereupon a flag is set

indicating that the analysis agrees with the manager's evaluation (step 2920). On the other hand, if the analysis did not determine that the employee had low skills, decision 2915 branches to "no" branch 2922 whereupon the flag is set  
5 indicating that the analysis did not agree with the manager's evaluation (step 2925).

10  
15  
20  
25  
30  
35  
40  
45  
50  
55  
60  
65  
70  
75  
80  
85  
90  
95  
100  
105  
110  
115  
120  
125  
130  
135  
140  
145  
150  
155  
160  
165  
170  
175  
180  
185  
190  
195  
200  
205  
210  
215  
220  
225  
230  
235  
240  
245  
250  
255  
260  
265  
270  
275  
280  
285  
290  
295  
300  
305  
310  
315  
320  
325  
330  
335  
340  
345  
350  
355  
360  
365  
370  
375  
380  
385  
390  
395  
400  
405  
410  
415  
420  
425  
430  
435  
440  
445  
450  
455  
460  
465  
470  
475  
480  
485  
490  
495  
500  
505  
510  
515  
520  
525  
530  
535  
540  
545  
550  
555  
560  
565  
570  
575  
580  
585  
590  
595  
600  
605  
610  
615  
620  
625  
630  
635  
640  
645  
650  
655  
660  
665  
670  
675  
680  
685  
690  
695  
700  
705  
710  
715  
720  
725  
730  
735  
740  
745  
750  
755  
760  
765  
770  
775  
780  
785  
790  
795  
800  
805  
810  
815  
820  
825  
830  
835  
840  
845  
850  
855  
860  
865  
870  
875  
880  
885  
890  
895  
900  
905  
910  
915  
920  
925  
930  
935  
940  
945  
950  
955  
960  
965  
970  
975  
980  
985  
990  
995  
1000  
1005  
1010  
1015  
1020  
1025  
1030  
1035  
1040  
1045  
1050  
1055  
1060  
1065  
1070  
1075  
1080  
1085  
1090  
1095  
1100  
1105  
1110  
1115  
1120  
1125  
1130  
1135  
1140  
1145  
1150  
1155  
1160  
1165  
1170  
1175  
1180  
1185  
1190  
1195  
1200  
1205  
1210  
1215  
1220  
1225  
1230  
1235  
1240  
1245  
1250  
1255  
1260  
1265  
1270  
1275  
1280  
1285  
1290  
1295  
1300  
1305  
1310  
1315  
1320  
1325  
1330  
1335  
1340  
1345  
1350  
1355  
1360  
1365  
1370  
1375  
1380  
1385  
1390  
1395  
1400  
1405  
1410  
1415  
1420  
1425  
1430  
1435  
1440  
1445  
1450  
1455  
1460  
1465  
1470  
1475  
1480  
1485  
1490  
1495  
1500  
1505  
1510  
1515  
1520  
1525  
1530  
1535  
1540  
1545  
1550  
1555  
1560  
1565  
1570  
1575  
1580  
1585  
1590  
1595  
1600  
1605  
1610  
1615  
1620  
1625  
1630  
1635  
1640  
1645  
1650  
1655  
1660  
1665  
1670  
1675  
1680  
1685  
1690  
1695  
1700  
1705  
1710  
1715  
1720  
1725  
1730  
1735  
1740  
1745  
1750  
1755  
1760  
1765  
1770  
1775  
1780  
1785  
1790  
1795  
1800  
1805  
1810  
1815  
1820  
1825  
1830  
1835  
1840  
1845  
1850  
1855  
1860  
1865  
1870  
1875  
1880  
1885  
1890  
1895  
1900  
1905  
1910  
1915  
1920  
1925  
1930  
1935  
1940  
1945  
1950  
1955  
1960  
1965  
1970  
1975  
1980  
1985  
1990  
1995  
2000  
2005  
2010  
2015  
2020  
2025  
2030  
2035  
2040  
2045  
2050  
2055  
2060  
2065  
2070  
2075  
2080  
2085  
2090  
2095  
2100  
2105  
2110  
2115  
2120  
2125  
2130  
2135  
2140  
2145  
2150  
2155  
2160  
2165  
2170  
2175  
2180  
2185  
2190  
2195  
2200  
2205  
2210  
2215  
2220  
2225  
2230  
2235  
2240  
2245  
2250  
2255  
2260  
2265  
2270  
2275  
2280  
2285  
2290  
2295  
2300  
2305  
2310  
2315  
2320  
2325  
2330  
2335  
2340  
2345  
2350  
2355  
2360  
2365  
2370  
2375  
2380  
2385  
2390  
2395  
2400  
2405  
2410  
2415  
2420  
2425  
2430  
2435  
2440  
2445  
2450  
2455  
2460  
2465  
2470  
2475  
2480  
2485  
2490  
2495  
2500  
2505  
2510  
2515  
2520  
2525  
2530  
2535  
2540  
2545  
2550  
2555  
2560  
2565  
2570  
2575  
2580  
2585  
2590  
2595  
2600  
2605  
2610  
2615  
2620  
2625  
2630  
2635  
2640  
2645  
2650  
2655  
2660  
2665  
2670  
2675  
2680  
2685  
2690  
2695  
2700  
2705  
2710  
2715  
2720  
2725  
2730  
2735  
2740  
2745  
2750  
2755  
2760  
2765  
2770  
2775  
2780  
2785  
2790  
2795  
2800  
2805  
2810  
2815  
2820  
2825  
2830  
2835  
2840  
2845  
2850  
2855  
2860  
2865  
2870  
2875  
2880  
2885  
2890  
2895  
2900  
2905  
2910  
2915  
2920  
2925  
2930  
2935  
2940  
2945  
2950  
2955  
2960  
2965  
2970  
2975  
2980  
2985  
2990  
2995  
3000  
3005  
3010  
3015  
3020  
3025  
3030  
3035  
3040  
3045  
3050  
3055  
3060  
3065  
3070  
3075  
3080  
3085  
3090  
3095  
3100  
3105  
3110  
3115  
3120  
3125  
3130  
3135  
3140  
3145  
3150  
3155  
3160  
3165  
3170  
3175  
3180  
3185  
3190  
3195  
3200  
3205  
3210  
3215  
3220  
3225  
3230  
3235  
3240  
3245  
3250  
3255  
3260  
3265  
3270  
3275  
3280  
3285  
3290  
3295  
3300  
3305  
3310  
3315  
3320  
3325  
3330  
3335  
3340  
3345  
3350  
3355  
3360  
3365  
3370  
3375  
3380  
3385  
3390  
3395  
3400  
3405  
3410  
3415  
3420  
3425  
3430  
3435  
3440  
3445  
3450  
3455  
3460  
3465  
3470  
3475  
3480  
3485  
3490  
3495  
3500  
3505  
3510  
3515  
3520  
3525  
3530  
3535  
3540  
3545  
3550  
3555  
3560  
3565  
3570  
3575  
3580  
3585  
3590  
3595  
3600  
3605  
3610  
3615  
3620  
3625  
3630  
3635  
3640  
3645  
3650  
3655  
3660  
3665  
3670  
3675  
3680  
3685  
3690  
3695  
3700  
3705  
3710  
3715  
3720  
3725  
3730  
3735  
3740  
3745  
3750  
3755  
3760  
3765  
3770  
3775  
3780  
3785  
3790  
3795  
3800  
3805  
3810  
3815  
3820  
3825  
3830  
3835  
3840  
3845  
3850  
3855  
3860  
3865  
3870  
3875  
3880  
3885  
3890  
3895  
3900  
3905  
3910  
3915  
3920  
3925  
3930  
3935  
3940  
3945  
3950  
3955  
3960  
3965  
3970  
3975  
3980  
3985  
3990  
3995  
4000  
4005  
4010  
4015  
4020  
4025  
4030  
4035  
4040  
4045  
4050  
4055  
4060  
4065  
4070  
4075  
4080  
4085  
4090  
4095  
4100  
4105  
4110  
4115  
4120  
4125  
4130  
4135  
4140  
4145  
4150  
4155  
4160  
4165  
4170  
4175  
4180  
4185  
4190  
4195  
4200  
4205  
4210  
4215  
4220  
4225  
4230  
4235  
4240  
4245  
4250  
4255  
4260  
4265  
4270  
4275  
4280  
4285  
4290  
4295  
4300  
4305  
4310  
4315  
4320  
4325  
4330  
4335  
4340  
4345  
4350  
4355  
4360  
4365  
4370  
4375  
4380  
4385  
4390  
4395  
4400  
4405  
4410  
4415  
4420  
4425  
4430  
4435  
4440  
4445  
4450  
4455  
4460  
4465  
4470  
4475  
4480  
4485  
4490  
4495  
4500  
4505  
4510  
4515  
4520  
4525  
4530  
4535  
4540  
4545  
4550  
4555  
4560  
4565  
4570  
4575  
4580  
4585  
4590  
4595  
4600  
4605  
4610  
4615  
4620  
4625  
4630  
4635  
4640  
4645  
4650  
4655  
4660  
4665  
4670  
4675  
4680  
4685  
4690  
4695  
4700  
4705  
4710  
4715  
4720  
4725  
4730  
4735  
4740  
4745  
4750  
4755  
4760  
4765  
4770  
4775  
4780  
4785  
4790  
4795  
4800  
4805  
4810  
4815  
4820  
4825  
4830  
4835  
4840  
4845  
4850  
4855  
4860  
4865  
4870  
4875  
4880  
4885  
4890  
4895  
4900  
4905  
4910  
4915  
4920  
4925  
4930  
4935  
4940  
4945  
4950  
4955  
4960  
4965  
4970  
4975  
4980  
4985  
4990  
4995  
5000  
5005  
5010  
5015  
5020  
5025  
5030  
5035  
5040  
5045  
5050  
5055  
5060  
5065  
5070  
5075  
5080  
5085  
5090  
5095  
5100  
5105  
5110  
5115  
5120  
5125  
5130  
5135  
5140  
5145  
5150  
5155  
5160  
5165  
5170  
5175  
5180  
5185  
5190  
5195  
5200  
5205  
5210  
5215  
5220  
5225  
5230  
5235  
5240  
5245  
5250  
5255  
5260  
5265  
5270  
5275  
5280  
5285  
5290  
5295  
5300  
5305  
5310  
5315  
5320  
5325  
5330  
5335  
5340  
5345  
5350  
5355  
5360  
5365  
5370  
5375  
5380  
5385  
5390  
5395  
5400  
5405  
5410  
5415  
5420  
5425  
5430  
5435  
5440  
5445  
5450  
5455  
5460  
5465  
5470  
5475  
5480  
5485  
5490  
5495  
5500  
5505  
5510  
5515  
5520  
5525  
5530  
5535  
5540  
5545  
5550  
5555  
5560  
5565  
5570  
5575  
5580  
5585  
5590  
5595  
5600  
5605  
5610  
5615  
5620  
5625  
5630  
5635  
5640  
5645  
5650  
5655  
5660  
5665  
5670  
5675  
5680  
5685  
5690  
5695  
5700  
5705  
5710  
5715  
5720  
5725  
5730  
5735  
5740  
5745  
5750  
5755  
5760  
5765  
5770  
5775  
5780  
5785  
5790  
5795  
5800  
5805  
5810  
5815  
5820  
5825  
5830  
5835  
5840  
5845  
5850  
5855  
5860  
5865  
5870  
5875  
5880  
5885  
5890  
5895  
5900  
5905  
5910  
5915  
5920  
5925  
5930  
5935  
5940  
5945  
5950  
5955  
5960  
5965  
5970  
5975  
5980  
5985  
5990  
5995  
6000  
6005  
6010  
6015  
6020  
6025  
6030  
6035  
6040  
6045  
6050  
6055  
6060  
6065  
6070  
6075  
6080  
6085  
6090  
6095  
6100  
6105  
6110  
6115  
6120  
6125  
6130  
6135  
6140  
6145  
6150  
6155  
6160  
6165  
6170  
6175  
6180  
6185  
6190  
6195  
6200  
6205  
6210  
6215  
6220  
6225  
6230  
6235  
6240  
6245  
6250  
6255  
6260  
6265  
6270  
6275  
6280  
6285  
6290  
6295  
6300  
6305  
6310  
6315  
6320  
6325  
6330  
6335  
6340  
6345  
6350  
6355  
6360  
6365  
6370  
6375  
6380  
6385  
6390  
6395  
6400  
6405  
6410  
6415  
6420  
6425  
6430  
6435  
6440  
6445  
6450  
6455  
6460  
6465  
6470  
6475  
6480  
6485  
6490  
6495  
6500  
6505  
6510  
6515  
6520  
6525  
6530  
6535  
6540  
6545  
6550  
6555  
6560  
6565  
6570  
6575  
6580  
6585  
6590  
6595  
6600  
6605  
6610  
6615  
6620  
6625  
6630  
6635  
6640  
6645  
6650  
6655  
6660  
6665  
6670  
6675  
6680  
6685  
6690  
6695  
6700  
6705  
6710  
6715  
6720  
6725  
6730  
6735  
6740  
6745  
6750  
6755  
6760  
6765  
6770  
6775  
6780  
6785  
6790  
6795  
6800  
6805  
6810  
6815  
6820  
6825  
6830  
6835  
6840  
6845  
6850  
6855  
6860  
6865  
6870  
6875  
6880  
6885  
6890  
6895  
6900  
6905  
6910  
6915  
6920  
6925  
6930  
6935  
6940  
6945  
6950  
6955  
6960  
6965  
6970  
6975  
6980  
6985  
6990  
6995  
7000  
7005  
7010  
7015  
7020  
7025  
7030  
7035  
7040  
7045  
7050  
7055  
7060  
7065  
7070  
7075  
7080  
7085  
7090  
7095  
7100  
7105  
7110  
7115  
7120  
7125  
7130  
7135  
7140  
7145  
7150  
7155  
7160  
7165  
7170  
7175  
7180  
7185  
7190  
7195  
7200  
7205  
7210  
7215  
7220  
7225  
7230  
7235  
7240  
7245  
7250  
7255  
7260  
7265  
7270  
7275  
7280  
7285  
7290  
7295  
7300  
7305  
7310  
7315  
7320  
7325  
7330  
7335  
7340  
7345  
7350  
7355  
7360  
7365  
7370  
7375  
7380  
7385  
7390  
7395  
7400  
7405  
7410  
7415  
7420  
7425  
7430  
7435  
7440  
7445  
7450  
7455  
7460  
7465  
7470  
7475  
7480  
7485  
7490  
7495  
7500  
7505  
7510  
7515  
7520  
7525  
7530  
7535  
7540  
7545  
7550  
7555  
7560  
7565  
7570  
7575  
7580  
7585  
7590  
7595  
7600  
7605  
7610  
7615  
7620  
7625  
7630  
7635  
7640  
7645  
7650  
7655  
7660  
7665  
7670  
7675  
7680  
7685  
7690  
7695  
7700  
7705  
7710  
7715  
7720  
7725  
7730  
7735  
7740  
7745  
7750  
7755  
7760  
7765  
7770  
7775  
7780  
7785  
7790  
7795  
7800  
7805  
7810  
7815  
7820  
7825  
7830  
7835  
7840  
7845  
7850  
7855  
7860  
7865  
7870  
7875  
7880  
7885  
7890  
7895  
7900  
7905  
7910  
7915  
7920  
7925  
7930  
7935  
7940  
7945  
7950  
7955  
7960  
7965  
7970  
7975  
7980  
7985  
7990  
7995  
8000  
8005  
8010  
8015  
8020  
8025  
8030  
8035  
8040  
8045  
8050  
8055  
8060  
8065  
8070  
8075  
8080  
8085  
8090  
8095  
8100  
8105  
8110  
8115  
8120  
8125  
8130  
8135  
8140  
8145  
8150  
8155  
8160  
8165  
8170  
8175  
8180  
8185  
8190  
8195  
8200  
8205  
8210  
8215  
8220  
8225  
8230  
8235  
8240  
8245  
8250  
8255  
8260  
8265  
8270  
8275  
8280  
8285  
8290  
8295  
8300  
8305  
8310  
8315  
8320  
8325  
8330  
8335  
8340  
8345  
8350  
8355  
8360  
8365  
8370  
8375  
8380  
8385  
8390  
8395  
8400  
8405  
8410  
8415  
8420  
8425  
8430  
8435  
8440  
8445  
8450  
8455  
8460  
8465  
8470  
8475  
8480  
8485  
8490  
8495  
8500  
8505  
8510  
8515  
8520  
8525  
8530  
8535  
8540  
8545  
8550  
8555  
8560  
8565  
8570  
8575  
8580  
8585  
8590  
8595  
8600  
8605  
8610  
8615  
8620  
8625  
8630  
8635  
8640  
8645  
8650  
8655  
8660  
8665  
8670  
8675  
8680  
8685  
8690  
8695  
8700  
8705  
8710  
8715  
8720  
8725  
8730  
8735  
8740  
8745  
8750  
8755  
8760  
8765  
8770  
8775  
8780  
8785  
8790  
8795  
8800  
8805  
8810  
8815  
8820  
8825  
8830  
8835  
8840  
8845  
8850  
8855  
8860  
8865  
8870  
8875  
8880  
8885  
8890  
8895  
8900  
8905  
8910  
8915  
8920  
8925  
8930  
8935  
8940  
8945  
8950  
8955  
8960  
8965  
8970  
8975  
8980  
8985  
8990  
8995  
9000  
9005  
9010  
9015  
9020  
9025  
9030  
9035  
9040  
9045  
9050  
9055  
9060  
9065  
9070  
9075  
9080  
9085  
9090  
9095  
9100  
9105  
9110  
9115  
9120  
9125  
9130  
9135  
9140  
9145  
9150  
9155  
9160  
9165  
9170  
9175  
9180  
9185  
9190  
9195  
9200  
9205  
9210  
9215  
9220  
9225  
9230  
9235  
9240  
9245  
9250  
9255  
9260  
9265  
9270  
9275  
9280  
9285  
9290  
9295  
9300  
9305  
9310  
9315  
9320  
9325  
9330  
9335  
9340  
9345  
9350  
9355  
9360  
9365  
9370  
9375  
9380  
9385  
9390  
9395  
9400  
9405  
9410  
9415  
9420  
9425  
9430  
9435  
9440  
9445  
9450  
9455  
9460  
9465  
9470  
9475  
9480  
9485  
9490  
9495  
9500  
9505  
9510  
9515  
9520  
9525  
9530  
9535  
9540  
9545  
9550  
9555  
9560  
9565  
9570  
9575  
9580  
9585  
9590  
9595  
9600  
9605  
9610  
9615  
9620  
9625  
9630  
9635  
9640  
9645  
9650  
9655  
9660  
9665  
9670  
9675  
9680  
9685  
9690  
9695  
9700  
9705  
9710  
9715  
9720  
9725  
9730  
9735  
9740  
9745  
9750  
9755  
9760  
9765  
9770  
9775  
9780  
9785  
9790  
9795  
9800  
9805  
9810  
9815  
9820  
9825  
9830  
9835  
9840  
9845  
9850  
9855  
9860  
9865  
9870  
9875  
9880  
9885  
9890  
9895  
9900  
9905  
9910  
9915  
9920  
9925  
9930  
9935  
9940  
9945  
9950  
9955  
9960  
9965  
9970  
9975  
9980  
9985  
9990  
9995  
10000  
10005  
10010  
10015  
10020  
10025  
10030  
10035  
10040  
10045  
10050  
10055  
10060  
10065  
10070  
10075  
10080  
10085  
10090  
10095  
10100  
10105  
10110  
10115  
10120  
10125  
10130  
10135  
10140  
10145  
10150  
10155  
10160  
10165  
10170  
10175  
10180  
10185  
10190  
10195  
10200  
10205  
10210  
10215  
10220  
10225  
10230  
10235  
10240  
10245

discussion may be telephonic or via electronic messaging and the results may be stored along with the manger's original evaluation. A determination is made as to whether the reviewing management now agrees with the manager's evaluation given the additional information (decision 2970). If the reviewing management now agrees with the manager's evaluation, decision 2970 branches to "yes" branch 2975 whereupon the flag indicating agreement is switched indicating that reviewing management now agrees with the manager's evaluation (step 2980) whereupon processing ends at 2990. If the reviewing management still does not agree with the manager's evaluation of the employee, decision 2970 branches to "no" branch 2985 whereupon the agreement flag remains "no" and processing ends at 2990.

Figure 30 is a flowchart showing detailed hierarchical management analysis of employee evaluations identified as having low skills. Processing commences at 3000 whereupon planning data and actual data corresponding to the employee is retrieved (step 3010) from employee data store 3005.

An agreement flag is initiated to "yes" indicating that the reviewing management assumes that the manager's evaluation of the employee is acceptable (step 3012). A determination is made as to whether the employee has been identified as a "top contributor" by the manager (decision 3015). If the employee has been identified as a top contributor, decision 3015 branches to "yes" branch 3018 whereupon the agreement flag is set "no" (step 3020). On the other hand, if the employee has not been identified as a top contributor, decision 3015 branches to "no" branch 3022 whereupon the agreement flag is not changed.

A determination is made as to whether the employee is receiving or has been recommended for stock options by the employee's manager (decision 3025). If the employee is receiving stock options or has been recommended for stock options, decision 3025 branches to "yes" branch 3028 whereupon the agreement flag is set to "no" (step 3030). On the other hand, if the employee is not receiving stock options and has not been recommended for stock options, decision 3025 branches to "no" branch 3032 whereupon the agreement flag is not changed.

10 A determination is made as to whether the employee has been recommended for a significant salary increase by the employee's manager (decision 3035). If the employee has been recommended for a significant salary increase, decision 3035 branches to "yes" branch 3038 whereupon the agreement flag is set to "no" (step 3040). On the other hand, if the employee has not been recommended for a significant salary increase, decision 3035 branches to "no" branch 3042 whereupon the agreement flag is not changed.

20 A determination is made as to whether the employee has been identified as having skills critical to the success of the organization (decision 3045). If the employee has been identified as having skills critical to the success of the organization, decision 3045 branches to "yes" branch 3048 whereupon the agreement flag is set to "no" (step 3050). On the other hand, if the employee has not been identified as having skills critical to the success of the organization, decision 3045 branches to "no" branch 3052 whereupon the agreement flag is not changed.

10  
20  
30  
40  
50  
60  
70  
80  
90  
100  
110  
120  
130  
140  
150  
160  
170  
180  
190  
200  
210  
220  
230  
240  
250  
260  
270  
280  
290  
300  
310  
320  
330  
340  
350  
360  
370  
380  
390  
400  
410  
420  
430  
440  
450  
460  
470  
480  
490  
500  
510  
520  
530  
540  
550  
560  
570  
580  
590  
600  
610  
620  
630  
640  
650  
660  
670  
680  
690  
700  
710  
720  
730  
740  
750  
760  
770  
780  
790  
800  
810  
820  
830  
840  
850  
860  
870  
880  
890  
900  
910  
920  
930  
940  
950  
960  
970  
980  
990  
1000  
1010  
1020  
1030  
1040  
1050  
1060  
1070  
1080  
1090  
1100  
1110  
1120  
1130  
1140  
1150  
1160  
1170  
1180  
1190  
1200  
1210  
1220  
1230  
1240  
1250  
1260  
1270  
1280  
1290  
1300  
1310  
1320  
1330  
1340  
1350  
1360  
1370  
1380  
1390  
1400  
1410  
1420  
1430  
1440  
1450  
1460  
1470  
1480  
1490  
1500  
1510  
1520  
1530  
1540  
1550  
1560  
1570  
1580  
1590  
1600  
1610  
1620  
1630  
1640  
1650  
1660  
1670  
1680  
1690  
1700  
1710  
1720  
1730  
1740  
1750  
1760  
1770  
1780  
1790  
1800  
1810  
1820  
1830  
1840  
1850  
1860  
1870  
1880  
1890  
1900  
1910  
1920  
1930  
1940  
1950  
1960  
1970  
1980  
1990  
2000  
2010  
2020  
2030  
2040  
2050  
2060  
2070  
2080  
2090  
2100  
2110  
2120  
2130  
2140  
2150  
2160  
2170  
2180  
2190  
2200  
2210  
2220  
2230  
2240  
2250  
2260  
2270  
2280  
2290  
2300  
2310  
2320  
2330  
2340  
2350  
2360  
2370  
2380  
2390  
2400  
2410  
2420  
2430  
2440  
2450  
2460  
2470  
2480  
2490  
2500  
2510  
2520  
2530  
2540  
2550  
2560  
2570  
2580  
2590  
2600  
2610  
2620  
2630  
2640  
2650  
2660  
2670  
2680  
2690  
2700  
2710  
2720  
2730  
2740  
2750  
2760  
2770  
2780  
2790  
2800  
2810  
2820  
2830  
2840  
2850  
2860  
2870  
2880  
2890  
2900  
2910  
2920  
2930  
2940  
2950  
2960  
2970  
2980  
2990  
3000  
3010  
3020  
3030  
3040  
3050  
3060  
3070  
3080  
3090  
3100  
3110  
3120  
3130  
3140  
3150  
3160  
3170  
3180  
3190  
3200  
3210  
3220  
3230  
3240  
3250  
3260  
3270  
3280  
3290  
3300  
3310  
3320  
3330  
3340  
3350  
3360  
3370  
3380  
3390  
3400  
3410  
3420  
3430  
3440  
3450  
3460  
3470  
3480  
3490  
3500  
3510  
3520  
3530  
3540  
3550  
3560  
3570  
3580  
3590  
3600  
3610  
3620  
3630  
3640  
3650  
3660  
3670  
3680  
3690  
3700  
3710  
3720  
3730  
3740  
3750  
3760  
3770  
3780  
3790  
3800  
3810  
3820  
3830  
3840  
3850  
3860  
3870  
3880  
3890  
3900  
3910  
3920  
3930  
3940  
3950  
3960  
3970  
3980  
3990  
4000  
4010  
4020  
4030  
4040  
4050  
4060  
4070  
4080  
4090  
4100  
4110  
4120  
4130  
4140  
4150  
4160  
4170  
4180  
4190  
4200  
4210  
4220  
4230  
4240  
4250  
4260  
4270  
4280  
4290  
4300  
4310  
4320  
4330  
4340  
4350  
4360  
4370  
4380  
4390  
4400  
4410  
4420  
4430  
4440  
4450  
4460  
4470  
4480  
4490  
4500  
4510  
4520  
4530  
4540  
4550  
4560  
4570  
4580  
4590  
4600  
4610  
4620  
4630  
4640  
4650  
4660  
4670  
4680  
4690  
4700  
4710  
4720  
4730  
4740  
4750  
4760  
4770  
4780  
4790  
4800  
4810  
4820  
4830  
4840  
4850  
4860  
4870  
4880  
4890  
4900  
4910  
4920  
4930  
4940  
4950  
4960  
4970  
4980  
4990  
5000  
5010  
5020  
5030  
5040  
5050  
5060  
5070  
5080  
5090  
5100  
5110  
5120  
5130  
5140  
5150  
5160  
5170  
5180  
5190  
5200  
5210  
5220  
5230  
5240  
5250  
5260  
5270  
5280  
5290  
5300  
5310  
5320  
5330  
5340  
5350  
5360  
5370  
5380  
5390  
5400  
5410  
5420  
5430  
5440  
5450  
5460  
5470  
5480  
5490  
5500  
5510  
5520  
5530  
5540  
5550  
5560  
5570  
5580  
5590  
5600  
5610  
5620  
5630  
5640  
5650  
5660  
5670  
5680  
5690  
5700  
5710  
5720  
5730  
5740  
5750  
5760  
5770  
5780  
5790  
5800  
5810  
5820  
5830  
5840  
5850  
5860  
5870  
5880  
5890  
5900  
5910  
5920  
5930  
5940  
5950  
5960  
5970  
5980  
5990  
6000  
6010  
6020  
6030  
6040  
6050  
6060  
6070  
6080  
6090  
6100  
6110  
6120  
6130  
6140  
6150  
6160  
6170  
6180  
6190  
6200  
6210  
6220  
6230  
6240  
6250  
6260  
6270  
6280  
6290  
6300  
6310  
6320  
6330  
6340  
6350  
6360  
6370  
6380  
6390  
6400  
6410  
6420  
6430  
6440  
6450  
6460  
6470  
6480  
6490  
6500  
6510  
6520  
6530  
6540  
6550  
6560  
6570  
6580  
6590  
6600  
6610  
6620  
6630  
6640  
6650  
6660  
6670  
6680  
6690  
6700  
6710  
6720  
6730  
6740  
6750  
6760  
6770  
6780  
6790  
6800  
6810  
6820  
6830  
6840  
6850  
6860  
6870  
6880  
6890  
6900  
6910  
6920  
6930  
6940  
6950  
6960  
6970  
6980  
6990  
7000  
7010  
7020  
7030  
7040  
7050  
7060  
7070  
7080  
7090  
7100  
7110  
7120  
7130  
7140  
7150  
7160  
7170  
7180  
7190  
7200  
7210  
7220  
7230  
7240  
7250  
7260  
7270  
7280  
7290  
7300  
7310  
7320  
7330  
7340  
7350  
7360  
7370  
7380  
7390  
7400  
7410  
7420  
7430  
7440  
7450  
7460  
7470  
7480  
7490  
7500  
7510  
7520  
7530  
7540  
7550  
7560  
7570  
7580  
7590  
7600  
7610  
7620  
7630  
7640  
7650  
7660  
7670  
7680  
7690  
7700  
7710  
7720  
7730  
7740  
7750  
7760  
7770  
7780  
7790  
7800  
7810  
7820  
7830  
7840  
7850  
7860  
7870  
7880  
7890  
7900  
7910  
7920  
7930  
7940  
7950  
7960  
7970  
7980  
7990  
8000  
8010  
8020  
8030  
8040  
8050  
8060  
8070  
8080  
8090  
8100  
8110  
8120  
8130  
8140  
8150  
8160  
8170  
8180  
8190  
8200  
8210  
8220  
8230  
8240  
8250  
8260  
8270  
8280  
8290  
8300  
8310  
8320  
8330  
8340  
8350  
8360  
8370  
8380  
8390  
8400  
8410  
8420  
8430  
8440  
8450  
8460  
8470  
8480  
8490  
8500  
8510  
8520  
8530  
8540  
8550  
8560  
8570  
8580  
8590  
8600  
8610  
8620  
8630  
8640  
8650  
8660  
8670  
8680  
8690  
8700  
8710  
8720  
8730  
8740  
8750  
8760  
8770  
8780  
8790  
8800  
8810  
8820  
8830  
8840  
8850  
8860  
8870  
8880  
8890  
8900  
8910  
8920  
8930  
8940  
8950  
8960  
8970  
8980  
8990  
9000  
9010  
9020  
9030  
9040  
9050  
9060  
9070  
9080  
9090  
9100  
9110  
9120  
9130  
9140  
9150  
9160  
9170  
9180  
9190  
9200  
9210  
9220  
9230  
9240  
9250  
9260  
9270  
9280  
9290  
9300  
9310  
9320  
9330  
9340  
9350  
9360  
9370  
9380  
9390  
9400  
9410  
9420  
9430  
9440  
9450  
9460  
9470  
9480  
9490  
9500  
9510  
9520  
9530  
9540  
9550  
9560  
9570  
9580  
9590  
9600  
9610  
9620  
9630  
9640  
9650  
9660  
9670  
9680  
9690  
9700  
9710  
9720  
9730  
9740  
9750  
9760  
9770  
9780  
9790  
9800  
9810  
9820  
9830  
9840  
9850  
9860  
9870  
9880  
9890  
9900  
9910  
9920  
9930  
9940  
9950  
9960  
9970  
9980  
9990  
10000

A determination is made as to whether the employee has been recommended for a promotion (decision 3060). If the employee has been has been recommended for a promotion, decision 3060 branches to "yes" branch 3065 whereupon the agreement flag is set to "no" (step 3070). On the other hand, if the employee has not been recommended for a promotion, decision 3060 branches to "no" branch 3075 whereupon the agreement flag is not changed.

Other determinations can be used, such as analyzing the employee's prior job performance evaluations, to also aid in determining whether the manager's evaluation of the employee as a low-skilled employee is correct or whether such decision warrants further in-depth review. Processing thereafter ends at 3095.

Figure 31 is a flowchart showing detailed hierarchical management analysis of employee evaluations identified as having high skills. Processing commences at 3100 whereupon planning data and actual data corresponding to the employee is retrieved (step 3110) from employee data store 3105.

An agreement flag is initiated to "yes" indicating that the reviewing management assumes that the manager's evaluation of the employee is acceptable (step 3112). A determination is made as to whether the employee has been identified as a "low contributor" by the manager (decision 3115). If the employee has been identified as a low contributor, decision 3115 branches to "yes" branch 3118 whereupon the agreement flag is set "no" (step 3120). On the other hand, if the employee has not been

identified as a low contributor, decision **3115** branches to "no" branch **3122** whereupon the agreement flag is not changed.

10 A determination is made as to whether the manager planned on giving the employee no salary increase (decision **3135**). If the employee was scheduled to receive no salary increase, decision **3135** branches to "yes" branch **3138** whereupon the agreement flag is set "no" (step **3140**). On the other hand, if the employee was scheduled to receive a salary increase, decision **3135** branches to "no" branch **3142** whereupon the agreement flag is not changed.

15 Other determinations can be used, such as analyzing the employee's prior job performance evaluations, to also aid in determining whether the manager's evaluation of the employee as a high-skilled employee is correct or whether such decision warrants further in-depth review. Processing thereafter ends at **3195**.

20 **Figure 32** is a flowchart showing management's comparison of employees within similar skill groups and levels for surplus recommendations. Processing commences at **3200** whereupon employees with the same skill group and level are selected (step **3205**) from sorted employees data store **3210**. Sorted employees data store **3210** includes employees grouped by skill group and level and sorted by the employees' evaluations.

25 The managers' evaluations of the selected employees are displayed to the manger(s) determining whether to retain or surplus employees (step **3215**). The first review factor corresponding to the selected skill group and level is selected

(step 3220). The subject employee's evaluation is compared to the other selected evaluations based on the review factor (step 3225). The analysis can include review of both objective and subjective measures corresponding to the employees. A  
5 determination is made as to whether there are more review factors to use for analysis (decision 3230). If there are more review factors to consider, decision 3230 branches to "yes" branch 3232 which loops back to select the next review factor for the selected skill group and level (step 3235) and analyze the employee based on the next review factor. This looping  
10 continues until all review factors have been considered, at which point decision 3230 branches to "no" branch 3238. The reviewing manager(s) form an initial recommendation (step 3240) as to whether the selected employee should be laid-off (i.e., surplus employee). The system's automated recommendation is  
15 retrieved (step 3245) from recommended surplus data store 3250 (see Figure 27 for details in the formation of the recommended surplus list).

A determination is made as to whether the managers' initial  
20 recommendation is the same as the automated recommendation (decision 3255). If the recommendations are the same, decision 3255 branches to "yes" branch 3258 whereupon the initial recommendation is finalized (step 3260) and processing returns at 3295. On the other hand, if the initial recommendation is  
25 not the same as the automated recommendation, decision 3255 branches to "no" branch 3265 whereupon another determination is made as to whether the managers agree with the automated recommendation (decision 3270). If the managers agree with the



automated recommendation, decision **3270** branches to "yes" branch **3290** which loops back to re-analyze the subject employee. This looping continues until either the managers' recommendation is the same as the automated recommendation (i.e., decision **3255** branches to "yes" branch **3258**) or the managers no longer agree with the automated recommendation (i.e., decision **3270** branches to "no" branch **3275**). On the other hand, if the managers do not agree with the automated recommendation (i.e., the managers' initial recommendation is preferred), decision **3270** branches to "no" branch **3275** whereupon the initial recommendation is finalized (step **3280**) and processing returns at **3295**.

**Figure 33** is a flowchart showing project office review of surplus recommendations. Project office review processing commences at **3300** whereupon the project office receives a surplus recommendation for an employee (step **3305**). Corporate surplus guidelines data store **3315** that define parameters corresponding to the resource reduction are read (step **3310**). A determination is made as to whether the employee recommended for surplus is in one of the affected areas (decision **3320**). If the employee is not in one of the affected areas, decision **3320** branches to "no" branch **3322** whereupon the surplus recommendation is rejected and returned to management with instructions for reworking the recommendation (step **3380**) and processing returns at **3395**.

On the other hand, if the employee is in one of the affected areas, decision **3320** branches to "yes" branch **3324** whereupon a determination is made as to whether the employee's skill group falls within the selected skill group (decision

3324). If the employee's skill group (and optionally the employee's level) are not within an affected skill group, decision 3325 branches to "no" branch 3326 whereupon the surplus recommendation is rejected and returned to management with  
5 instructions for reworking the recommendation (step 3380) and processing returns at 3395.

On the other hand, if the employee's skill group falls within the selected skill group, decision 3325 branches to "yes" branch 3328 whereupon the employee's evaluation is analyzed by  
10 the project office (predefined process 3330, see Figure 29 for processing details). A determination is made as to whether the employee's evaluation is acceptable (decision 3340). If the evaluation of the employee is not acceptable, decision 3340  
15 branches to "no" branch 3342 whereupon the surplus recommendation is rejected and returned to management with instructions for reworking the recommendation (step 3380) and processing returns at 3395.

On the other hand, if the evaluation of the employee is acceptable, decision 3340 branches to "yes" branch 3348  
20 whereupon the employee's evaluation is compared to other employees in the same skill group and level (predefined process 3350, see Figure 32 for processing details). A determination is made as to whether the project office agrees with management's surplus recommendation for the employee (decision 3355). If the  
25 managers' recommendation is not acceptable, decision 3355 branches to "no" branch 3356 whereupon the surplus recommendation is rejected and returned to management with

instructions for reworking the recommendation (step 3380) and processing returns at 3395.

On the other hand, if the managers' surplus recommendation is acceptable, decision 3355 branches to "yes" branch 3358  
5 whereupon the employee is analyzed (step 3360) using additional corporate surplus guidelines set forth in corporate surplus guidelines 3315. A determination is made as to whether the surplus recommendation is acceptable in light of any additional corporate surplus guidelines (decision 3370). If the surplus  
10 recommendation is not acceptable, decision 3370 branches to "no" branch 3372 whereupon the surplus recommendation is rejected and returned to management with instructions for reworking the recommendation (step 3380) and processing returns at 3395. On the other hand, if the surplus recommendation is acceptable,  
15 decision 3370 branches to "yes" branch 3374 whereupon a flag is set indicating that the project office agrees with the managers' surplus recommendation regarding the employee and processing returns at 3395.

**Figure 34** is a flowchart showing legal review of surplus  
20 recommendations. Legal review processing commences at 3400 whereupon the employee's employment data is reviewed (step 3405) using local employment laws (data store 3410) applicable to the employee and the organization. Some laws may require additional severance compensation or benefits be provided to the employee  
25 based on the employee's employment factors. For example, a local law may require employees to receive a minimum of four weeks of severance pay regardless of the number of years the employee has been employed by the organization. Any additional

compensation needed to comply with laws is stored in additional compensation data store 3415. Likewise, the individual employee's employment data is reviewed against state and national laws (steps 3420 and 3430 and respective data stores 3425 and 3435) to determine whether additional compensation needs to be allocated and included in additional compensation data store 3415 in order to process the surplus recommendation. In addition, the individual employee data is reviewed using local, state/provincial and national laws to ensure that the employee can be laid off without violating applicable laws.

A determination is made as to whether the surplus recommendation for the individual employee can be processed without violating any local, state/provincial, or national laws (decision 3440). If processing the surplus recommendation would violate any applicable laws, decision 3440 branches to "no" branch 3442 whereupon the surplus recommendation is rejected and returned to management to rework along with guidance pertaining to the laws in question (step 3445) and legal review processing returns at 3495.

On the other hand, if processing the individual employee surplus recommendation does not violate any applicable laws, decision 3440 branches to "yes" branch 3448 in order to aggregate the employees and perform further legal analyses. The employee's data record is moved from retained employees data store 3455 to surplus employees data store 3460 (step 3450). The surplus employees data store is compared with the retained employees data store to ensure that protected classes of employees are not being discriminated against in violation of

any applicable laws (step 3465). The retained employees and surplus employees are analyzed using local, state/provincial, and national laws (steps 3470, 3475, and 3480 respectively).

10 A determination is made as to whether the recommendation to  
5 surplus the employee violates any applicable laws when reviewing  
aggregate employee groups (decision 3485). The analysis of  
aggregate groups of employees may be delayed until all employees  
have been analyzed and a complete list of employees recommended  
as surplus is provided by management. If the recommendation to  
surplus the employee violates any applicable laws when reviewed  
as a group, decision 3485 branches to "no" branch 3488 whereupon  
the employee data record is moved (step 3490) from surplus  
employees data store 3460 back to retained employees data store  
3455, the surplus recommendation is rejected and returned to  
15 management to rework along with guidance pertaining to the laws  
in question (step 3445) and legal review processing returns at  
3495. On the other hand, if the recommendation to surplus the  
employee does not violate any applicable laws when reviewed as a  
group, decision 3485 branches to "yes" branch 3492 whereupon  
20 processing returns at 3495.

25 **Figure 35** is a flowchart showing financial impact  
estimation of a proposed surplus action prior to evaluation of  
employees' skills. Impact estimation processing commences at  
3500 whereupon general severance provisions are established for  
the organization (step 3505) and stored in general severance  
provision data store 3510. General severance provisions may  
include benefits and compensation the organization plans on  
providing to surplus employees that are laid off. For example,

an organization may plan on giving each surplus employee two weeks of pay for every year they have worked for the company and six months of medical benefits so that the employees can locate and transition to different jobs with less personal impact on the affected employees.

Organizational data includes affected area data store 3525 and employee data store 3515 that includes compensation information for current employees. Surplus areas are selected (step 3520) as well as skill groups and levels (steps 3530 and 3535). The surplus percentage for the skill and level are determined and stored (step 3540). An expected savings (i.e., annual salary savings) is calculated by computing the average compensation paid to employees of the given skill group and level by the estimated number of surplus employees that will be reduced based on the surplus percentage. A determination is made as to whether the general severance provisions are planned for the selected skill group (decision 3550). If the general severance provisions are planned for the selected skill group, decision 3550 branches to "yes" branch 3552 whereupon an estimated cost to surplus the planned percentage of employees is calculated using the general severance provisions (step 3555). For example, if the average number of years worked and weekly salary within a given skill group and level is 10 years and \$500, respectively, and the organization plans on providing surplus employees with 2 weeks pay for each year they have worked, then the estimated cost to surplus the group of employees would be 20 weeks of pay multiplied by the \$500 average weekly salary for an estimated cost of \$10,000 for each

surplus employee within the skill group and level. Therefore, if the organization plans on laying off 15 such employees, the planned cost would be approximately \$150,000.

On the other hand, if general severance provisions are not used for the affected skill group and level, decision 3550 branches to "no" branch 3558 to process the different severance provision. For example, an organization may wish to provide increased severance benefits to a particular group of employees for certain business reasons. These severance provisions for the given skill group and level are provided and stored (step 3560). An estimated cost to surplus the planned percentage of employees is calculated using the special severance provisions (step 3565).

A determination is made as to whether there are more affected levels within the skill group to process (decision 3570). If there are more affected levels, decision 3570 branches to "yes" branch 3572 whereupon processing identifies the next level within the skill group (step 3575) and loops back to estimate savings and costs for the next level. This looping continues until there are no more affected levels for the skill group, at which point decision 3570 branches to "no" branch 3578. A determination is made as to whether there are more affected skill groups to process within the affected organizational areas (decision 3580). If there are more affected skill groups, decision 3580 branches to "yes" branch 3582 whereupon processing identifies the next skill group within the affected area (step 3585) and loops back to estimate savings and costs for the next skill group. This looping continues

until there are no more affected skill groups, at which point decision **3580** branches to "no" branch **3588**. A total estimated savings and cost are displayed for all affected skill groups and levels (step **3590**).

5 A determination is made as to whether the planned resource reduction needs to be changed (decision **3595**). For example, an organization may need to reduce costs by \$1 million and the estimated savings only indicates that \$900 thousand in salaries will be saved by the planned resource reduction. In this case, more employees will have to be identified as surplus by increasing the surplus percentage for one or more skill groups and levels. In addition, costs to perform the resource reduction may have a budget of \$500,000 but, using the planned severance provisions the costs are estimated at \$600,000. In this case, the severance provisions can be reduced, for example 2 weeks pay for every year worked with a maximum of 10 weeks of pay per employee, to reduce the severance costs. If estimated savings and/or costs need to change, decision **3595** branches to "yes" branch **3596** which loops back to revise and edit severance provisions and surplus percentages. This looping continues until the estimated costs and savings are acceptable, at which point decision **3595** branches to "no" branch **3598** and processing ends at **3599**.

25 **Figure 36** is a flowchart showing financial impact analysis of a surplus action after evaluating and recommending individual employees for surplus disposition. Impact analysis processing commences at **3600** whereupon a first surplus employee is selected (step **3605**) from surplus employee data store **3615**. A total cost



and a total savings amount are each initialized to 0 (step 3620). Savings is calculated as the current total savings amount plus the amount saved based on the selected employee's salary (step 3630). A determination is made as to whether the selected employee receives an alternate severance package rather than the general severance package (decision 3635) based on the employee's skill group and/or the employee's level. If the employee receives an alternate severance plan, decision 3635 branches to "yes" branch 3638 whereupon the alternate severance formula is selected (step 3640) from severance provisions data store 3610. On the other hand, if the employee does not receive an alternate severance plan, decision 3635 branches to "no" branch 3642 whereupon the general severance formula is selected (step 3645) from severance provisions data store 3610.

Any additional compensation payable to the employee is retrieved (step 3650) from additional compensation data store 3625. Additional compensation may be payable, for example, to satisfy various employment laws pertaining to laying off the particular employee (see **Figure 34** for details). The amount of severance payable to the employee is calculated by using the selected employee's employment data (i.e., compensation), the selected severance formula, and any additional compensation (step 3655). The total cost is calculated by adding the severance cost for the selected employee to the current total cost (step 3660). A determination is made as to whether there are more surplus employees (decision 3670). If there are more surplus employees, decision 3670 branches to "yes" branch 3675 which selects the next surplus employee (step 3680) and loops

back to calculate the savings and cost pertaining to the next selected employee. This looping continues until there are no more surplus employees, at which point decision **3670** branches to "no" branch **3685** whereupon the total savings and severance costs are displayed (step **3690**) and processing ends at **3495**.

**Figure 37** is a flowchart showing management notification of surplus employees. Employee notification processing commences at **3700** whereupon a manager selects a first surplus employee (step **3704**). The manager, with possible assistance from other employees in the organization, determines whether a non-compete agreement is needed between the employee and the organization (step **3708**). A non-compete agreement may be needed if the employee is in possession or knowledge of organizational trade secrets and the disclosure of the trade secrets to competitors would be detrimental to the organization.

A determination is made as to whether a non-compete agreement is needed (decision **3712**). If a non-compete agreement is needed, decision **3712** branches to "yes" branch **3714** and the necessary non-compete provisions are added to the employee's data for processing by the employee (step **3716**). On the other hand, if a non-compete agreement is not needed, decision **3712** branches to "no" branch **3718** which bypasses the step of adding non-compete provisions to the employee's data.

A notification is prepared (with or without a non-compete agreement depending on decision **3712**) and the notification and surplus information materials are provided to the employee (step **3720**). The manager marks the notification by digitally signing

2004-10-10 09:44:00  
a notification which is included in a surplus data store along with a timestamp corresponding to the manager's notification (step 3724). A determination is made as to whether there are more employees for the manager to notify (decision 3724). If there are more employees to notify, decision 3724 branches to "yes" branch 3730 which loops back to process and notify the next employee. This looping continues until there are no more employees to notify, at which time decision 3728 branches to "no" branch 3734 whereupon the manager receives any notices regarding notifications from the project office (step 3736). A determination is made as to whether any project office notifications are received (decision 3740). If any project office notifications are received, decision 3740 branches to "yes" branch 3742 which selects the employee data corresponding to the notification (step 3744) and loops back to notify the selected employee. On the other hand, if the manager does not receive any project office notifications, decision 3740 branches to "no" branch 3746 and the manager's employee notification processing ends at 3748.

Employee notification processing commences at 3750 whereupon the employee receives and processes the surplus notice provided by the manager (predefined process 3752, see Figure 38 for processing details). The notice from the manager may be an electronic notice that has been digitally signed by the manager so that the employee can authenticate the sender of the notice. Employee processing thereafter ends at 3756.

Project office notification processing commences at 3760 whereupon the project office waits for a period of time to allow

mangers to notify surplus employees (step 3764). After the time period elapses, the project offices selects surplus employees that have not yet been notified (step 3768). A determination is made as to whether the list of non-notified employees is empty (decision 3772). If the list is empty, decision 3772 branches to "yes" branch 3774 and project office notification processing ends at 3776.

On the other hand, if the list of non-notified surplus employees is not empty, decision 3772 branches to "no" branch 3778 whereupon the first employee in the list is selected (step 3780). A notification is prepared, digitally signed, and sent to the selected employee's manager informing the manager that the employee needs to be informed concerning the resource reduction (step 3784). A determination is made as to whether there are more surplus employees in the list that have not been notified (decision 3788). If there are more surplus employees in the list, decision 3788 branches to "yes" branch 3790 whereupon processing loops to select (step 3792) and notify manager of the next employee in the list. This looping continues until there are no more employees in the list, whereupon decision 3788 branches to "no" branch 3794 which loops back to wait for another time interval (step 3764) before checking to see if all surplus employees have been notified by their management. This looping continues until the list of non-notified surplus employees is empty, at which point decision 3772 branches to "yes" branch 3774 and processing ends at 3776.

**Figure 38** is a flowchart showing processing of surplus notification and non-compete obligations by affected employees.

Surplus employee processing commences at **3800** whereupon the employee receives (step **3805**) original surplus notice **3810** from the employee's management. The employee processes the notice (step **3815**). In one embodiment, the notice is an electronic  
5 message that is processed by opening the message.

10 A determination is made as to whether a non-compete agreement is included in the surplus notice (decision **3820**). If non-compete provisions are included, decision **3820** branches to "yes" branch **3822** whereupon the non-compete provisions and the surplus information is displayed to the employee (step **3825**). On the other hand, if non-compete provisions are not included, decision **3820** branches to "no" branch **3828** whereupon the surplus information is displayed to the employee (step **3830**). Surplus information may include information about the employee's  
15 severance benefits as well as a termination date.

20 The employee is prompted for a response, such as a digital signature, after viewing the information (step **3835**). A determination is made as to whether the employee signed the document indicating the employee's acknowledgement to the surplus information and agreement to any included non-compete provisions (decision **3840**). If the employee signed the document, decision **3840** branches to "yes" branch **3844** whereupon the employee's digital signature is stored along with any non-compete provisions (step **3845**) and the employee is sent a key  
25 (step **3850**), such as a userid/password, to use to access special surplus benefits systems and data that assist the employee in locating employment either within or outside the organization as well as transition information. On the other hand, if the

employee does not sign the document, decision 3840 branches to "no" branch 3842 which bypasses steps 3845 and 3850. Surplus employee processing thereafter ends at 3855.

Management processing commences at 3860 whereupon the manager waits for a sufficient time for notified employees to sign the documents concerning surplus information and/or non-compete obligations (step 3865). After the waiting period elapses, employees that report to the manager that have non-compete obligations that have not been signed by the respective employees are selected (step 3870). A determination is made as to whether the list of employees is empty (decision 3875). If the list is not empty, decision 3875 branches to "no" branch 3882 whereupon the first employee in the list is selected (step 3880) and a notification is prepared and sent (step 3885) from the manager to the employee asking the employee to sign the document acknowledging the employee's non-compete obligations.

A determination is made as to whether there are more employees in the list to notify (decision 3890). If there are more employees, decision 3890 branches to "yes" branch 3892 which selects (step 3895) and notifies the next employee from the list. This looping continues until there are no more employees to notify, at which point decision 3890 branches to "no" branch 3896 which loops back to wait for a time interval (step 3865) and recheck the employee data to determine whether all employees with non-compete obligations have signed documents acknowledging such obligations. This looping continues until the list of employees that have non-compete obligations and have

not signed acknowledgements is empty, at which point decision 3875 branches to "yes" branch 3878 and processing ends at 3899.

Figure 39 is a hierarchy chart showing relationships between processes involved in managing organizational resources. Resource reduction processing (module 3900, see Figure 20) includes modules for preprocessing surplus data (module 3910, see Figure 21), work elimination (module 3920, see Figure 23), evaluation (module 3930), reviewing (module 3940, see Figure 28), impact analysis (module 3950, see Figure 36), and employee notification (module 3960).

Preprocessing module 3910 further includes modules to build evaluation templates (module 3912, see Figure 22), and to estimate the impact of the resource reduction (module 3914, see Figure 35).

Evaluation module 3930 includes modules to identify affected employees (module 3932, see Figure 24), to evaluate the identified employees (module 3934, see Figure 25), to sort the evaluated employees (module 3936, see Figure 26), and to analyze the evaluated employees (module 3938, see Figure 27).

Review module 3940 includes modules to analyze employees by management (module 3941, see Figure 29), to compare employees with one another in order to make surplus recommendations (module 3944, see Figure 32), for project office review of surplus recommendations (module 3946, see Figure 33), and for legal review of surplus recommendations (module 3948, see Figure 34). Analyze employees module 3941 further includes modules for analyzing low skilled employees (module 3942, see Figure 30),

and for analyzing high skilled employees (module 3943, see Figure 31).

Notice module 3460 includes modules for notifying employees (module 3462, see Figure 37) and for receiving acknowledgements from employees (module 3464, see Figure 38).

10  
15  
20  
25  
Figure 40 illustrates information handling system 4001 which is a simplified example of a computer system capable of performing the present invention. Computer system 4001 includes processor 4000 which is coupled to host bus 4005. A level two (L2) cache memory 4010 is also coupled to the host bus 4005. Host-to-PCI bridge 4015 is coupled to main memory 4020, includes cache memory and main memory control functions, and provides bus control to handle transfers among PCI bus 4025, processor 4000, L2 cache 4010, main memory 4020, and host bus 4005. PCI bus 4025 provides an interface for a variety of devices including, for example, LAN card 4030. PCI-to-ISA bridge 4035 provides bus control to handle transfers between PCI bus 4025 and ISA bus 4040, universal serial bus (USB) functionality 4045, IDE device functionality 4050, power management functionality 4055, and can include other functional elements not shown, such as a real-time clock (RTC), DMA control, interrupt support, and system management bus support. Peripheral devices and input/output (I/O) devices can be attached to various interfaces 4060 (e.g., parallel interface 4062, serial interface 4064, infrared (IR) interface 4066, keyboard interface 4068, mouse interface 4070, and fixed disk (FDD) 4072) coupled to ISA bus 4040. Alternatively, many I/O devices can be accommodated by a super I/O controller (not shown) attached to ISA bus 4040.



BIOS 4080 is coupled to ISA bus 4040, and incorporates the necessary processor executable code for a variety of low-level system functions and system boot functions. BIOS 4080 can be stored in any computer readable medium, including magnetic storage media, optical storage media, flash memory, random access memory, read only memory, and communications media conveying signals encoding the instructions (e.g., signals from a network). In order to attach computer system 4001 another computer system to copy files over a network, LAN card 4030 is coupled to PCI-to-ISA bridge 4035. Similarly, to connect computer system 4001 to an ISP to connect to the Internet using a telephone line connection, modem 4075 is connected to serial port 4064 and PCI-to-ISA Bridge 4035.

While the computer system described in **Figure 40** is capable of executing the invention described herein, this computer system is simply one example of a computer system. Those skilled in the art will appreciate that many other computer system designs are capable of performing the copying process described herein.

One of the preferred implementations of the invention is an application, namely, a set of instructions (program code) in a code module which may, for example, be resident in the random access memory of the computer. Until required by the computer, the set of instructions may be stored in another computer memory, for example, in a hard disk drive, or in a removable memory such as an optical disk (for eventual use in a CD ROM) or floppy disk (for eventual use in a floppy disk drive), or

downloaded via the Internet or other computer network. Thus, the present invention may be implemented as a computer program product for use in a computer. In addition, although the various methods described are conveniently implemented in a general purpose computer selectively activated or reconfigured by software, one of ordinary skill in the art would also recognize that such methods may be carried out in hardware, in firmware, or in more specialized apparatus constructed to perform the required method steps.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that, based upon the teachings herein, changes and modifications may be made without departing from this invention and its broader aspects and, therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of this invention. Furthermore, it is to be understood that the invention is solely defined by the appended claims. It will be understood by those with skill in the art that is a specific number of an introduced claim element is intended, such intent will be explicitly recited in the claim, and in the absence of such recitation no such limitation is present. For non-limiting example, as an aid to understanding, the following appended claims contain usage of the introductory phrases "at least one" and "one or more" to introduce claim elements. However, the use of such phrases should not be construed to imply that the introduction of a claim element by the indefinite articles "a" or "an" limits any particular claim containing such introduced

claim element to inventions containing only one such element,  
even when the same claim includes the introductory phrases "one  
or more" or "at least one" and indefinite articles such as "a"  
or "an"; the same holds true for the use in the claims of  
5 definite articles.

RECEIVED  
JAN 10 1993  
FBI - NEW YORK